GOODWAY

2014

HVAC & BUILDING MAINTENANCE

RAM-PRO-XL™

The new revolutionary chiller tube cleaner with TubeGuard™ technology

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TubeGuard™-XL

A custom formulated tablet for corrosion inhibition of copper and ferrous metal tubes. Safe to handle, completely biodegradable and designed with environmentally friendly chemicals.

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INNOVATIVE MAINTENANCE SOLUTIONS

GOODWAY'S GLOBAL MARKET

As the world has become smaller and smaller, Goodway's business presence in it has become larger and larger. Today, Goodway products are in use in almost every country in the world, and on all seven continents, including Antarctica!

To better serve our customers, Goodway has expanded its operation to include sales and service arms throughout North, Central and South America, Europe, the Middle and Far East, Asia, Africa and Australia. Beyond maintaining a successful presence in these markets, Goodway catalogs are now available on-line in a variety of languages. This is a direct result of Goodway's continued success in the world maintenance market. As Goodway continues its worldwide expansion, Goodway's world will always revolve around you...our customer.

GLOBAL SALES AND DISTRIBUTION CENTERS

Goodway has sales and distribution centers located in the following countries: Argentina, Australia, Bolivia, Brazil, Chile, China, Colombia, Costa Rica, Ecuador, Egypt, El Salvador, England, Finland, France, Germany, Greece, Guatemala, Honduras, Ireland, Italy, Japan, Korea, Libya, Malaysia, Mexico, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Pakistan, Peru, Philippines, Rumania, Russia, Saudi Arabia, Singapore, South Africa, Spain, Switzerland, Taiwan, Thailand, Trinidad, Turkey, United Arab Emirates, Venezuela and Vietnam.

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New For 2014!

GUARANTEE Every Goodway product is backed by over 40 years of experience. We guarantee satisfaction with everything we sell.

CUSTOMER SERVICE Our dedicated and knowledgeable distributors and customer service staff are on call to answer any product questions you may have. If they can't answer your question, they will find someone who can.

PROVEN RESULTS Our reputation has allowed us to keep the same customers for years. Ask around and you'll find that we are known for reliability and customer support. It's the reason why we've been growing and expanding for over 40 years.

STAY GREEN We've always been green! While the rest of the world is just catching on, Goodway has always been committed to greater energy efficiency since we started. Our products will help keep your mechanical equipment running at peak efficiency, saving energy and money, and producing less pollutants.

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CoilPro® High Flow Coil Cleaner

IDEAL FOR CLEANING MICROCHANNELS

FEATURES

> 28 BAR at 11,4 LPM
> Siphon tube to inject chemicals at 10:1 ratio
> 3,7 m hose (additional 3,7 m extension hoses available)
> 915 mm sectional 9,5 mm diameter stainless steel condenser wand
> 460 mm wand with two nozzles (soap and flat spray)
> Wide variety of custom attachments

Specifications	CC-400HF
Motor Power:	0.75 kW
Input Power:	15 Amps, 115 V, 50/60 Hz AC
	Optional: 15 Amps, 230V, 50/60 Hz AC
Power Supply Cord:	7,6 m, 14-3
Water Requirements:	Minimum 1,4 BAR at 13,2 LPM
Output Water Pressure:	28 BAR
Output Water Flow:	11.4 LPM
Pump:	Axial
Dimensions:	330mm High x 760 mm Wide x 300 mm Deep
Weight:	20 kg, Net Dry

Optional:

RCC-13 Extension hose, 3,7 m

QDN-LP25 Replacement Foaming Nozzle

QDN-1512Y Replacement Flat Spray Nozzle

RCC-10-SK Water Seal Kit

COILSHINE Coil cleaning solution, case of four 3,8 liter bottles

CoilPro® Coil Cleaners

FEATURES

> Deep cycle 12 V rechargeable battery (CC-JR, CC-100 and CC-140)
> Integrated water tank (CC-JR, CC-100, CC-140 and CC-600)
> Integrated chemical tank (CC-JR, CC-100 CC-140 and CC-600)
> Control valve to inject chemicals
> Wand and custom nozzles
> Wide variety of custom attachments

PATENT PENDING

CE Specific Models Only

Compact Coil Cleaner

BackPack Coil Cleaner

Coil Cleaner

High Flow Coil Cleaner

High Flow Coil Cleaner

Specifications	CC-JR	CC-100	CC-140	CC-600	CC-400HF
Motor Power:	0,15 kW	0,07 kW	0,15 kW	1 kW	0.75 kW
Input Power:	12 Amps, 12 V, DC Rechargeable VRLA Battery	4 Amps, 12 V, DC Rechargeable VRLA Battery	3 Amps, 115 V, 50/60 Hz AC or 12 Amps, 12 V,	13 Amps, 115 V, 60 Hz AC	15 Amps, 115 V, 60 Hz AC
	•	•	DC Rechargeable VRLA Battery	Optional: 6,5 Amp, 230 V, 50 Hz AC	Optional: 15 Amps, 230 V, 50/60 Hz AC
	•	•	Optional: 1,5 Amp, 230 V, 50/60 Hz AC	•	•
Recharge Power:	0,3 Amp, 115 V, 50/60 Hz AC	0,3 Amp, 115 V, 50/60 Hz AC	1 Amp, 115 V, 50/60 Hz AC	•	•
	Optional: 0,2 Amp, 230 V, 50/60 Hz AC	Optional: 0,15 Amp, 230 V, 50/60 Hz AC	Optional: 0,5 Amp, 230 V, 50/60 Hz AC	•	•
Power Supply Cord:	•	•	11,3 m, 14-3 GFCI	11,3 m, 14-3 GFCI	7,6 m, 14-3 GFCI
Water Requirements:	On-Board	On-Board	On-Board or Minimum 1,4 BAR at 5,7 LPM	On-Board or Minimum 1,4 BAR at 7,9 LPM	Minimum 1,4 BAR at 13,2 LPM
Output Water Pressure:	8,6 BAR	2,8 to 6,9 BAR	2,8 to 9,7 BAR	41 BAR	28 BAR
Output Water Flow:	1 to 2,3 LPM	1 to 1,9 LPM	1 to 3,8 LPM	6 LPM	11,4 LPM
Pump:	Positive Displacement Diaphragm	Positive Displacement Diaphragm	Positive Displacement Diaphragm	Positive Displacement Piston	Axial
Hose:	3 m, Reinforced, Self Coiling	3 m, Reinforced, Self Coiling	7,6 m, Reinforced	7,6 m, Reinforced	3,7 m, Reinforced
Wand(s):	915 mm, Stainless Steel (9.5 mm Diameter)	460 mm, Plated Steel	460 mm, Plated Steel	460 mm, Plated Steel	915 mm, Stainless Steel (9,5 mm Diameter)
	•	•	•	•	and 460 mm, Plated Steel
Nozzle:	Two Quick Connect	Three Quick Connect	Four Quick Connect	Three Quick Connect	Two Quick Connect
Water Tank:	12,5 Liter, Internal	19 Liter, Internal	19 Liter, Internal	19 Liter, Internal	•
Chemical Injector:	Upstream, Adjustable at 30:1 to 6:1 Ratio	Upstream at 6:1 Ratio	Upstream at 6:1 Ratio	Upstream at 6:1 Ratio	Upstream at 10:1 Ratio
Chemical Tank:	1,7 Liter, Internal	2,8 Liter, Internal	19 Liter, Internal	19 Liter, Internal	•
Dimensions:	480 mm High x 460 mm Wide x 250 mm Deep	610 mm High x 480 mm Wide x 350 mm Deep	1.120 mm High x 660 mm Wide x 460 mm Deep	1.120 mm High x 660 mm Wide x 460 mm Deep	330 mm High x 760 mm Wide x 300 mm Deep
Weight:	9 kg, Net Dry	11 kg, Net Dry	34 kg, Net Dry	39 kg, Net Dry	20 kg, Net Dry

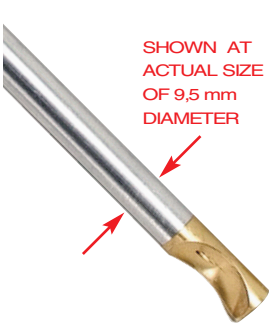
CoilVac® Dry HEPA Vacuum

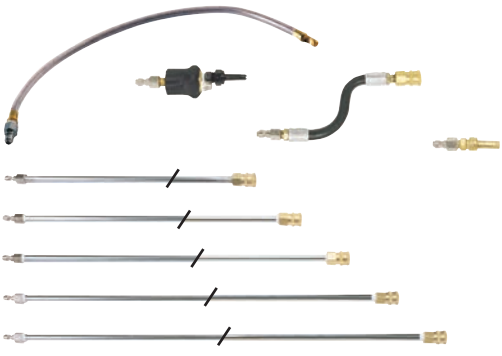
FEATURES

> Large HEPA filter – 99.97% efficient at 0.3 microns
> 1,9 liter paper filter collection bag
> Matching intake and exhaust couplings allows for use as a vacuum or a blower
> Two speed settings to match application
> Steel tank and chromed end caps
> Carrying handle and shoulder strap
> Custom accessories specifically designed for coil cleaning applications

Specifications	CVC-100
Motor Power:	3 kW
Input Power:	12 Amps, 115 V, 50/60 Hz AC
	Optional: 6 Amps, 230 V, 50/60 Hz AC
Power Supply Cord:	7,6 m, 18-3
Static Water Lift:	1,8 m (low Speed) to 2,3 m (High Speed)
Air Displacement:	102 m^3/h (low Speed) to 119 m^3/h (High Speed)
Filtration:	5 Microns Paper Bag, 15 Microns Cloth, Foam and 0.3 Micron HEPA
Dry Capacity:	1,9 Liters
Noise Level:	58 dBA (low Speed) to 68 dBA (High Speed)
Special Features:	Vacuum or Blower
Dimensions:	460mm Long x 170 mm Diameter
Weight:	4,1 kg

Coil Cleaner Accessories





WONDER WAND

The ultra thin Wonder Wand is designed to slip between the fan guard grating of condenser units, allowing you to thoroughly clean the coils from the inside, without having to remove the top of the unit. Spraying the coils in this direction, opposite to normal air flow, provides for a more thorough cleaning of the unit.

8945 Wonder Wand, 90° Spray Wand, 910 mm (for CC-JR, CC-100, CC-140 and CC-600)
8945-48 Wonder Wand, 90° Spray Wand, 1.220 mm (for CC-JR, CC-100, CC-140 and CC-600)

NOZZLES, EXTENSION WANDS AND ADAPTERS

8945-FLEX-24 Flexible Extension Wand, 610 mm (for CC-JR, CC-100 and CC-140)
9618 Rollover Nozzle Assembly
9650 Flexible Extension Wand, 250 mm
9654 Pinpoint Foaming Nozzle
9655 Extension Wand, 460 mm
9656 Extension Wand, 610 mm
9657 Extension Wand, 910 mm
9658 Extension Wand, 1.220 mm
9659 Extension Wand, 1.520 mm
QDN Quick Connect Nozzles
Note: When placing order, specify nozzle spray pattern and machine (i.e. 25° cleaning nozzle for CC-140).
QDN-45 Adapter, 45°
QDN-90 Adapter, 90°

WHEEL AND DOLLY KIT

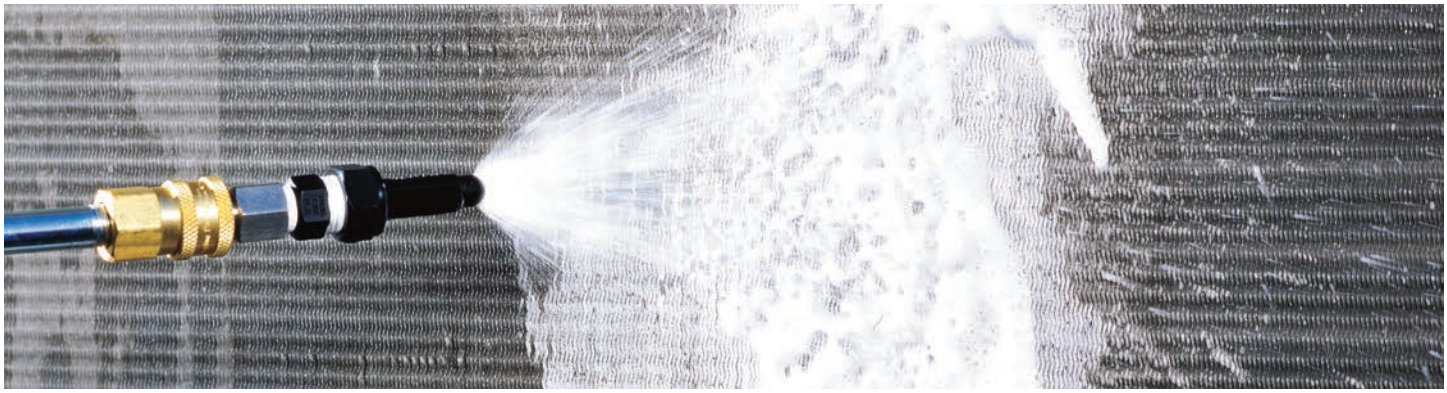
This kit allows you to attach wheels and a dolly handle to the CC-100 Backpack CoilPro for easy mobility.

9683 Wheel and Dolly Kit

COILVAC® DOLLY MOUNTING KIT

This kit allows you to attach the CoilVac to either a CC-140 or CC-600 CoilPro to create a complete coil cleaning system. The kit's brackets and accessory bin attach to the CoilPro's dolly with no modifications needed. All fastening hardware is included, just bolt on the two support brackets and the accessory bin. The CoilVac can be used while mounted to the dolly, and the bin holds all the tools and extra collection bags you may need in a compact and efficient package.

CVC-CC-BRACKET CoilVac Dolly Mounting Kit to attach the CoilVac to a CC-140 or CC-600 CoilPro Coil Cleaner



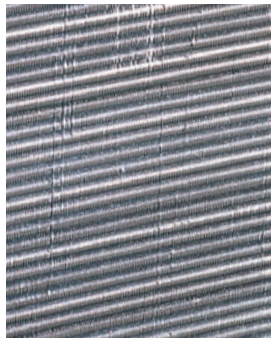
Coil Cleaner Chemicals

COILSHINE®

CoilShine is an environmentally friendly, biodegradable, expanding foam detergent specifically formulated for use with the CoilPro. This unique solution penetrates deep into coil beds for thorough cleaning. It is user friendly, non-acidic, and non-fuming, allowing it to be used in occupied areas and safely washed down drains.

COILSHINE Coil Cleaning Solution, one case (four 3,8 liter bottles)
COILSHINE-5 Coil Cleaning Solution, 19 liter bucket
COILSHINE-55 Coil Cleaning Solution, 208 liter drum (not shown)
COILSHN-XC-4X1 Coil Cleaning Solution Concentrate, 1 gallon bottle, 5 gallon bucket, (30 gallon drum, 55 gallon drum, 275 and 330 gallon tote, not shown)

> Coil before cleaning with CoilShine.



> Coil after cleaning with CoilShine.

COILSHINE-BC

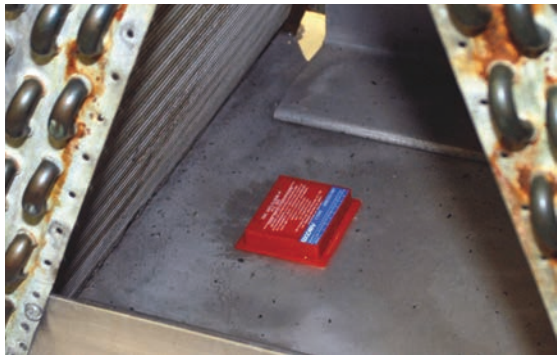
CoilShine-BC (Bio-Clean) is EPA registered for application to all components of HVAC systems. It is an environmentally friendly, commercial grade, biodegradable, ready-to-use Bacteriostat, Fungistat and Mildewstat. It is formulated to be applied with the CoilPro in air handlers, air ducts, drain pans and other HVAC components to help prevent the growth of odor, stain and damage causing organisms including bacteria, fungi, mold and mildew.

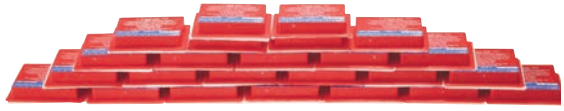
COILSHINE-BC Bacteria, Fungi, Mold and Mildew Inhibitor Solution, one case (four 3,8 liter bottles)

DRAIN PAN BIOCIDE TABLETS

Got condensate drain pans? Then you've got trouble! HVAC condensate drain pans are breeding grounds for slime, sludge and toxic bacteria like Legionella Pheumophila (Legionnaire's Disease). Not only can this build up of debris cause clogging of the drain lines resulting in water overflow and damage to the building, but the bacteria can become airborne resulting in "sick building syndrome" and health problems for the building's occupants. How can you fight this harmful build-up of debris in your drain pans? Use PanCare from Goodway on a regular basis! PanCare is an EPA registered biocide. It is formulated to help prevent the build-up of slime and bacteria in HVAC condensate drain pans. It kills 99% of Legionella Pheumophila and Salmonella Typhii Bacteria. It also contains a rust inhibitor. Each tablet is weighted to prevent floating and will work for up to 3 months, on a on a 2,7 to 4,5-metric ton on or a 40-metric ton system (depending on tablet) providing a constant release of biocide into the water.

PANCARE-24 Pancare Tablets for a 2,7 to 4,5-metric ton system, one case (24 tablets)
PANCARE-45-6 Pancare Tablets for a 40-metric ton system, one case (6 tablets)





TowerWash Cooling Tower Fill Cleaner

FEATURES

> Integrated continuous duty air compressor for enhanced foam production
> Custom wand extensions and nozzles
> Heavy-duty, chemical resistant components and dolly
> Platform to hold one standard 19 liter chemical container
> Water hose connection to dilute cleaning solution or provide a clean water rinse
> Hose, wand and tool holders

Specifications	TFC-100
Compressor Output:	4,1 BAR at 28 LPM
Input Power:	5 Amps, 115 V, 60 Hz AC
	Optional: 5 Amps, 115 V, 50 Hz; 2,5 Amps, 230 V, 60 Hz;
	or 2,5 Amps, 230 V, 50 Hz
Output Foaming Volume:	76 LPM
Output Water Pressure:	Same as Supplied
Output Water Flow:	6 LPM
Pump:	Positive Displacement Diaphragm
Dimensions:	1.220 mm High x 480 mm Wide x 660 mm Deep
Weight:	39 kg, Net Dry

FEATURES

> Heavy-duty construction
> 7.62 m steel reinforced hose
> 914 mm stainless steel wand
> Variable pressure nozzle
> Can use hot water
> Locking casters
> Pressure Regulator
> Pulse Control

Specifications	GPW-1400
Motor Power:	1.12 kW
Input Power:	Standard: 15 Amps, 115 V, 60 Hz AC
	Optional: 15 Amps, 115 V, 50 Hz; 7.5 Amps, 230 V, 60 Hz;
	or 7.5 Amps, 230 V, 50 Hz
Power Supply Cord:	11 m, 14-3 GFCI
Water Requirements:	Minimum 1,7 BAR at 8.3 LPM
Output Water Pressure:	Adjustable, 7-97 BAR
Output Water Flow:	6.4 LPM
Dimensions:	1016 mm (H) x 356 (W) x 533 (D)
Weight:	43 kg, Net Dry

TOWERSHINE

TowerShine is an environmentally friendly, biodegradable, expanding foam detergent specifically formulated for use with the TowerWash.

TOWERSHINE-5 Cooling Tower Fill Cleaning Solution, 19 liter bucket

TowerVac™ Cooling Tower Vacuum

FEATURES

> Stainless steel construction
> Heavy-duty motor removes up to 189 liters of water and debris per minute
> Semi-automatic pump primer
> Adjustable flow control
> In-line sediment filter
> Quick connect hoses and tools
> Easy storage of accessories

CE
Specific Models Only

PATENTED

Specifications	CTV-1501
Motor Power:	1 kW
Input Power:	15 Amps, 115 V, 60 Hz AC
	Optional: 15 Amps, 115 V, 50 Hz; 6,2 amps, 230 V, 60 Hz;
	or 6,2 amps, 230 V, 50 Hz
Power Supply Cord:	6,4 m, 14-3 GFCI
Static Water Lift:	7,6 m
Water Displacement:	Variable, 0-189 LPM
Filtration:	5 mm Sediment Capture
Pump:	Centrifugal
Dimensions:	890 mm High x 560 mm Wide x 530 mm Deep
Weight:	57 kg, Net Dry

CTV-KIT-1501 Cooling Tower Vacuum Accessory Kit 40 mm: 7,6 m vinyl crush proof extension hose, 910 mm extension tube, 510 mm floor brush, 300 mm paddle tool, 460 mm bulk pickup tool, and 150 mm utility brush

Note: Call for additional accessories.

TowerVac™ Filtration System

FEATURES

> Reusable filters
> Quick lock lids
> Quick connect hoses and tools

Specifications	CTV-F2
Input Water Pressure:	Maximum 2,1 BAR at 189 LPM
Filters:	Two reusable synthetic,
	3,7 square meter, 5 micron media
Dimensions:	970 mm High x 510 mm Wide x
	510 mm Deep
Weight:	32 kg, Net Dry

Replacement Filters:

9703 Replacement Filter

9703-6 Replacement filters (package of six)

RAM-PRO™ Rotary Tube Cleaner

Rugged and Dependable

The powerful RAM-PRO handles the demanding environment of commercial contracting work like no other tube cleaner.

Designed for contractors: Sturdy roll cage protects the RAM-PRO at the job site and in the back of a crowded work truck.

Saves time: Quick Connect shaft attaches with a simple push – and quickly disassembles for transport.

Peak on-site performance: No more slipped belts or equipment down time. Chain drive system replaces traditional rubber belt for smooth performance in challenging situations.

Handles rough environments: Motor assembly is connected with vibration isolators to help tolerate bumps and jolts.

Compact and lightweight: Easy to carry and less than 1/2 the weight of other tube cleaners.

PATENT PENDING

FEATURES

> Heavy-duty roll cage construction
> Ultra compact design
> Quick connect threadless shaft manifold
> Interchangeable flexible shafts
> Interchangeable cleaning brushes and tools
> "Sweet Spot" 862.5 RPM
> Simultaneous water flush
> Forward and reverse foot switch activation

Specifications	RAM-PRO
Application:	Smooth Bore and Enhanced Tubes
Tube Size Range:	6,4 to 25,4 mm I.D.
Motor Power:	0,19 kW (115 V Model)
	0,37 kW (230 V Model)
Input Power:	5,5 Amps, 115 V, 60 Hz AC
	Optional 5,5 Amps, 115 V, 50 Hz;
	4,5 Amps, 230 V, 60 Hz; or 4,5 Amps, 230 V, 50 Hz
Power Supply Cord:	3 m, 18-3 GFCI
Shaft Speed:	862,5 RPM
Shaft Feed Method:	Manual
Shaft Length:	Maximum 22,9 m
Water Requirements:	Minimum 2,1 BAR at 7,6 LPM
Special Features:	Roll Cage
	Quick Connect Threadless Shaft Manifold
	Reversible Shaft Rotation
	Water Flush
Dimensions:	405 mm High x 230 mm Wide x 510 mm Deep
Weight:	15 kg Net Dry

TubeGuard-XL™ Corrosion Inhibitor

1 CLEAN

- Variable shaft speed
- Reversible shaft rotation
- Simultaneous flush of TubeGuard-XL chemical

2 DISINFECT

- TubeGuard-XL tablet eliminates biofilm

3 PROTECT

- TubeGuard-XL tablet prevents corrosion

TubeGuard-XL
TUBE CLEANING & CORROSION PROTECTION TABLETS
Blasts Bio Film
Protects Against Corrosion
Tube Cleaning & Corrosion Protection Tablets
Biodegradable • Effective
USE AS DIRECTED. KEEP OUT OF REACH OF CHILDREN.
NET CONTENTS: 4 TABLETS
GOODWAY
Your source for quality maintenance

TubeGuard™-XL – It's Revolutionary!

A custom formulated tablet design is the best available technology for corrosion inhibition of copper and ferrous metal tubes. The TubeGuard-XL tablet is safe to handle, completely biodegradable and designed with environmentally friendly chemicals. Specifically designed to work with the all new RAM-PRO-XL, this revolutionary tube cleaning process will forever change the ease and effectiveness of both eliminating bio-film and preventing corrosion. No measuring or dosing of chemicals is required. The TubeGuard-XL tablet simply dissolves in the RAM-PRO-XL's on-board reservoir during tube cleaning; flushing the tubes in FDA certified bio-film removal compounds.

TUBEGUARD-XL
Package of four tube cleaning tablets (for 3 average sized chiller cleanings). For use with the RAM-PRO-XL

RAM-PRO-XL™ Rotary Tube Cleaner

RAM-PRO-XL – It's A Game Changer!

The RAM-PRO-XL is an innovative new tube cleaner that utilizes TubeGuard technology with a custom formulated tablet designed specifically for chiller tubes. The XL version is the more powerful big brother to the popular RAM-PRO introduced 2 years ago. The TubeGuard tablet dispenser along with variable shaft speed control and reversible shaft rotation makes it the most advanced portable tube cleaner available today.

RAM-PRO-XL
Tube cleaner w/ quick connect manifold, integrated roll cage/dolly, two direction foot switch (115V, 50/60 Hz)

RAM-PRO-XL-A (230V, 50/60 Hz)

FEATURES

- On-board TubeGuard dispensing system
- Heavy-duty roll cage construction with integrated dolly
- 0.372 kW motor
- Direct Drive
- Quick connect threadless shaft manifold
- Interchangeable cleaning tools
- Variable shaft speed
- Reversible shaft rotation
- Simultaneous water flush
- Power cord and foot pedal storage

Specifications	RAM-PRO-XL
Motor Power:	Standard: .372kW
Input Power:	Standard: 5.5 amps, 115 V, 50/60 Hz AC
	Optional: 3 amps, 230 V, 50/60 Hz AC
Power Supply Cord:	6.4 m, 14-3 GFCI
Flexible Shaft Speed:	Variable 0-900 rpm
Water Requirements:	2.068 BAR at 7.57 LPM
Dimensions:	508 mm High x 406 mm Wide x 660 mm Deep
Weight:	24.94 kg, Net Dry

Rotary Tube Cleaners

*Manual or Mechanical Shaft Feed

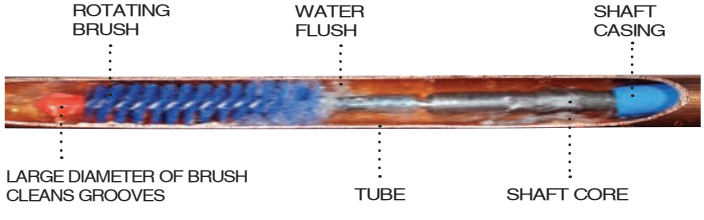
	RAM-PRO Wet, Smooth Bore and Enhanced tubes	RAM-PRO XL Wet, Smooth Bore and Enhanced tubes	RAM-4 Wet, Smooth Bore and Enhanced tubes	RAM-5SFVS Wet and Smooth Bore tubes (with manual or mechanical feed)	RAM-6 Wet, Smooth Bore and Enhanced tubes (with 500 PSI water flush)
Tube Size Range:	6,35 mm - 25,4 mm I.D.	6,35 mm - 25,4 mm I.D.	6,35 mm - 25,4 mm I.D.	6,35 mm - 25,4 mm I.D. (manual) 11,09 mm - 25,4 mm I.D. (mechanical)	6,35 mm - 25,4 mm I.D.
Motor Power:	.186 kW (115 V) .375 kW (230 V)	.375 kW	.375 kW	.559 kW	1.112 kW
Input Power:	Standard: 5.5 amps, 115 V, 60 Hz AC Optional: 5.5 amps, 115 V, 50 Hz; 4.5 amps, 230 V, 60 Hz; or 4.5 amps, 230 V, 50 Hz	Standard: 10 amps, 110 V, 50/60 Hz AC Optional: 10 amps, 230 V, 50/60 Hz AC	Standard: 9 amps, 115 V, 60 Hz AC Optional: 9 amps, 115 V, 50 Hz; 4.5 amps, 230 V, 60 Hz; or 4.5 amps, 230 V, 50 Hz	Standard: 12 amps, 115 V, 60 Hz AC Optional: 12 amps, 115 V, 50 Hz; 6 amps, 230 V, 60 Hz; or 6 amps, 230 V, 50 Hz	Standard: 15 amps, 115 V, 60 Hz AC Optional: 15 amps, 115 V, 50 Hz; 7.5 amps, 230 V, 60 Hz; or 7.5 amps, 230 V, 50 Hz
Power Supply Cord:	3,65 m, 18-3 GFCI	6,40 m, 14-3 GFCI	6,40 m, 14-3 GFCI	6,40 m, 14-3 GFCI	6,40 m, 14-3 GFCI
Air Requirements:	•	•	•	•	•
Shaft Speed:	862.5 rpm	Adjustable, 0-900 rpm	862.5 rpm	Adjustable, 200-862.5 rpm	Adjustable, 200-800 rpm
Shaft Length:	Standard up to 22,86 m	Standard up to 22,86 m	Standard up to 22,86 m	Standard up to 22,86 m	Standard up to 22,86 m
Special Features:	Reversible shaft rotation Water flush Chain Drive Quick connect shaft manifold Roll cage	Direct Drive Roll cage with integrated wheels and handle On-board chemical applicator	Reversible shaft rotation (optional) Water flush Quick connect shaft manifold	Reversible shaft rotation Water flush Chain Drive Quick connect shaft manifold Mechanical feed up to 3' per second Mechanical feed force at 50 lbs	Variable speed Reversible shaft rotation Chemical injection Up to 500 PSI water flush Quick connect shaft manifold

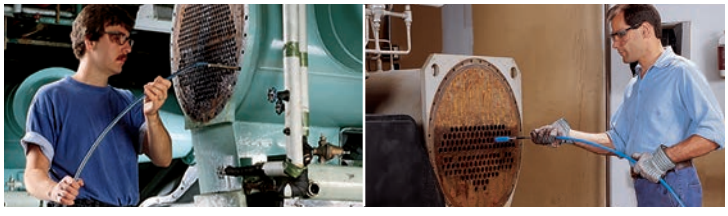
FEATURES

> Heavy-duty construction
> Quick connect threadless shaft manifold
> Interchangeable wet, dry and high temperature flexible shafts
> Interchangeable cleaning brushes and tools
> Simultaneous water flush or vacuum (depending on model)
> Foot switch or gun activation (depending on model)

CE
Specific Models Only

CSA C US
Specific Models Only





IRAM
Wet or Dry Smooth Bore Tubes/Pipes/Hoses

RAM-4X
Wet or Dry Smooth Bore Tubes/Pipes/Hoses

RAM-4X2A & RAM-4X
Wet or Dry Smooth Bore Tubes/Pipes/Hoses

AWT-100
Wet or Dry Smooth Bore Tubes/Pipes/Hoses

AWT-100X
Wet or Dry Smooth Bore Tubes/Pipes/Hoses

	IRAM	RAM-4X	RAM-4X2A & RAM-4X	AWT-100	AWT-100X
Tube Size Range:	6,4 to 25,4 mm I.D.	25,4 mm I.D. and up	25,4 mm" I.D. and up	6,35 mm I.D. and up	6,35 mm I.D. and up
Motor Power:	0.4 kW	.735 kW	1.47 kW	1.1 kW	Up to 2.9 kW
Input Power:	Standard: 4,5 amps, 230 V, 60 Hz AC Optional: 4,5 amps, 230 V, 50 Hz;	Standard: 13 amps, 115 V, 60 Hz AC Optional: 13 amps, 115 V, 50 Hz; 6.5 amps, 230 V, 60 Hz; or 6.5 amps, 230 V, 50 Hz	Standard: 11.5 amps, 230 V, 60 Hz AC Optional: 11.5 amps, 230 V, 50 Hz;	•	•
Power Supply Cord:	6,5 m, 14-3 GFCI	6,4 m, 14-3 GFCI	6,4 m, 14-3 GFCI	•	•
Air Requirements:	•	•	•	Minimum 60 PSI at 15 CFM, Maximum 100 PSI at 70 CFM	Minimum 60 PSI at 85 CFM, Maximum 100 PSI at 130 CFM
Shaft Speed:	Standard: 860 rpm	Standard: 1,725 rpm Optional: 862.5 rpm	Standard: 1,725 rpm Optional: 862.5 rpm	Adjustable, 500-3,000 rpm	Adjustable, 500-3000 rpm
Shaft Length:	Standard 22,9 m	Standard up to 22,9 m	Standard up to 22,9 m	Standard up to 22,9 m	Standard up to 22,9 m
Special Features:	HandCarried Water flush	Reversible shaft rotation Water flush Quick connect shaft manifold Optional dry vacuum attachment	Water flush Optional dry vacuum attachment Quick connect shaft manifold	Air powered Variable speed Water flush Quick connect shaft manifold Optional dry vacuum attachment	Air powered Variable speed Water flush Quick connect shaft manifold Optional dry vacuum attachment

Optional for RAM-4:
834R Two-Direction Foot Switch for cleaning internally enhanced tubes

Optional for RAM-5SF:
834R-SF Two-Direction Foot Switch for cleaning internally enhanced tubes

SFG-702 Speed-Feed Gears for GTC-702 Shaft

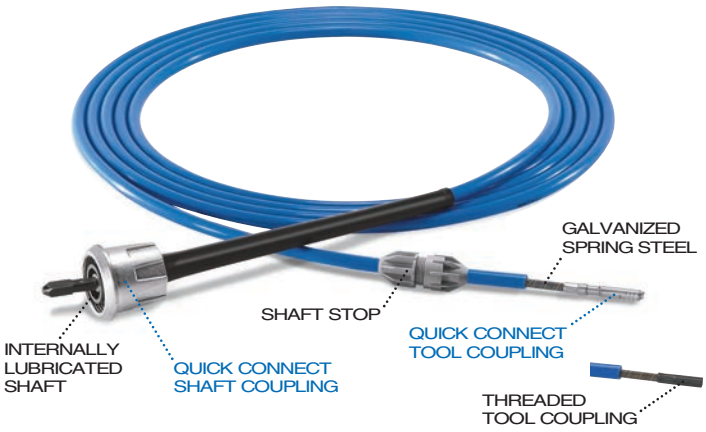
SFG-703 Speed-Feed Gears for GTC-703 Shaft

SFG-704 Speed-Feed Gears for GTC-704 Shaft

Optional for RAM-6:
R6-CLEANER
Tube Cleaning Solution, 3,8 liter bottle

Flexible Shafts

GTC-701/GTC-702/GTC-703/GTC-704/GTC-720 PATENTED



FEATURES

> Abrasion Resistant Blue Nylon Casing provides high visibility for safety and a toughest exterior to withstand harsh industrial environments
> Internally Lubricated Shaft Insert molded out of a self lubricating material reduces friction and increases shaft life
> Metal Nut provides a secure connection to the drive unit without any concern for breakage
> Strain Relief System custom molded with a variable thickness allows for a gradual radial bend that is far superior to a spring or coiled wire
> Shaft Stop which can be positioned anywhere along the shaft lets you know when the end of the tube has been reached
> Quick Connect Couplings allow you to change shafs, brushes and cleaning tools up to 30 times faster than on shafts with threaded connections
> Galvanized Spring Steel comprised of multiple counter rotated windings provides unmatched performance and long durability

Flexible Shaft Dimensions

Shaft No.	Casing O.D.	Tool End Thread	Shaft No.	Casing O.D.	Tool End Thread
701	6,4 mm	8-32 female	720	19,1 mm	½-12 female
702	9,5 mm	¼-28 female	721	22,2 mm	½-12 female
703	12,7 mm	¼-28 female	721G	22,2 mm	½-12 female
704	14,3 mm	¼-28 female	821	22,2 mm	½-12 female

Quick Connect Fittings

WET / DRY APPLICATIONS

Flexible Shafts (Nylon Casing) for Tubes 6,4 to 9,5 mm I.D.

GTC-701-12 Flexible Shaft, 3,7 m
GTC-701-25 Flexible Shaft, 7,6 m

Flexible Shafts (Nylon Casing) for Tubes 11,1 to 12,7 mm I.D.

GTC-702Q-12 Flexible Shaft, 3,7 m
GTC-702Q-17 Flexible Shaft, 5,2 m
GTC-702Q-25 Flexible Shaft, 7,6 m
GTC-702Q-35 Flexible Shaft, 10,7 m
GTC-702Q-45 Flexible Shaft, 13,7 m

Flexible Shafts (Nylon Casing) for Tubes 14.3 to 25.4 mm I.D.

GTC-703Q-12 Flexible Shaft, 3,7 m
GTC-703Q-17 Flexible Shaft, 5,2 m
GTC-703Q-25 Flexible Shaft, 7,6 m
GTC-703Q-35 Flexible Shaft, 10,7 m
GTC-703Q-45 Flexible Shaft, 13,7 m
GTC-703Q-60 Flexible Shaft, 18,3 m
GTC-703Q-75 Flexible Shaft, 22,9 m

Flexible Shafts (Nylon Casing) for Tubes 17,5 to 25,4 mm I.D.

GTC-704Q-12 Flexible Shaft, 3,7 m
GTC-704Q-17 Flexible Shaft, 5,2 m
GTC-704Q-25 Flexible Shaft, 7,6 m
GTC-704Q-35 Flexible Shaft, 10,7 m
GTC-704Q-45 Flexible Shaft, 13,7 m
GTC-704Q-60 Flexible Shaft, 18,3 m
GTC-704Q-75 Flexible Shaft, 22,9 m

Note: GTC-702Q, GTC-703Q and GTC-704Q Flexible Shafts are available with standard threaded tool couplings. To order leave off the "Q" in the part number.

Note: GTC-703, GTC-703Q, GTC-704 and GTC-704Q Flexible Shafts for use with a RAM-5SF Speed-Feed Tube Cleaner require a special shaft stop. To order, add the suffix R5 to the part number.

Flexible Shafts (Nylon Casing) for Tubes 25,4 mm I.D. and Up

GTC-720-15 Flexible Shaft, 4,6 m
GTC-720-25 Flexible Shaft, 7,6 m
GTC-720-35 Flexible Shaft, 10,7 m
GTC-720-50 Flexible Shaft, 15,2 m

DRY APPLICATIONS

Flexible Shafts (Covered Steel Casing) for Tubes 25,4 mm I.D. and Up

GTC-721-15 Flexible Shaft, 4,6 m
GTC-721-25 Flexible Shaft, 7,6 m
GTC-721-35 Flexible Shaft, 10,7 m
GTC-721-50 Flexible Shaft, 15,2 m

Flexible Shafts (Heat Resistant 149°C Rigid Covered Steel Casing) for Tubes 25,4 mm I.D. and Up

GTC-721G-15 Flexible Shaft, 4,6 m
GTC-721G-25 Flexible Shaft, 7,6 m
GTC-721G-35 Flexible Shaft, 10,7 m
GTC-721G-50 Flexible Shaft, 15,2 m

Flexible Shafts (High Temperature Tolerant 232°C Stainless Steel Casing) for Tubes 25,4 mm I.D. and Up

GTC-821-15 Flexible Shaft, 4,6 m
GTC-821-25 Flexible Shaft, 7,6 m
GTC-821-35 Flexible Shaft, 10,7 m
GTC-821-50 Flexible Shaft, 15,2 m

CRIMPING TOOLS FOR FLEXIBLE SHAFT REPAIR

SHAFT CUTTING AND CRIMPING PRESS

Shaft Cutting and Crimping Press

The Shaft Cutting and Crimping Press is specifically designed for use with Goodway GTC-701, GTC-702 and GTC-703 Flexible Shafts. This unique tool will allow the user to quickly cut and repair flexible shafts in the field without the use of any other tools.

PCC-BASE Shaft Cutting and Crimping Press with cutting dies

Note: Crimping dies not included.

Crimping Dies

DIE-SET-701/702/703 Dies for GTC-701/702/703 Flexible Shafts (specify shaft)

Crimping Block

Goodway's Crimping Block provides the user with quick, convenient methods for performing repairs of flexible shafts in the field. Used properly, each will permanently attach repair couplings, extending the life of the flexible shaft while reducing downtime when a repair is needed.

GTC-CT5 Crimping Block with punch
GTC-CTP Replacement Punch

CRIMPING BLOCK

FLEXIBLE SHAFT REPAIR COUPLINGS AND KITS

Flexible shaft repair kits include four drive end repair couplings, four thrust washers, four tool end repair couplings, four O-rings, one crimping tool with punch, one flexible shaft lubricator with quick disconnect, and two 0,5 liter bottles of lubricant for flexible shaft lubricator.

Standard Thread Tool End Repair Couplings

717-1/2/3/6 Coupling for GTC-701/702/703/704 Flexible Shafts (specify shaft)
717-4 Coupling for GTC-720/721/721G/821 Flexible Shafts

Quick Connect Tool End Repair Couplings

717-2Q/3Q/6Q Coupling for GTC-702Q/703Q/704Q Flexible Shafts with quick connect fittings (specify shaft)

Flexible Shaft Drive End Repair Couplings

713-1/2/3/5 Coupling for GTC-701/702/703/704 Flexible Shafts (specify shaft)
713-6 Coupling for GTC-720/721/721G/821 Flexible Shafts

Flexible Shaft Repair Kits

REP-701/702/703/704-KIT Repair Kit for GTC-701/702/703/704 Flexible Shafts (specify shaft)
REP-702Q/703Q/704Q-KIT Repair Kit for GTC-702Q/703Q/704Q Flexible Shafts (specify shaft)
REP-720-KIT Repair Kit for GTC-720 Flexible Shafts

FLEXIBLE SHAFT REPAIR KIT

THREADED TOOL END REPAIR COUPLING

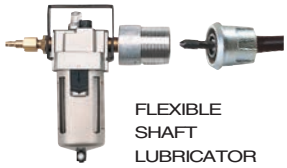
QUICK CONNECT TOOL END REPAIR COUPLING

DRIVE END REPAIR COUPLING

FLEXIBLE SHAFT LUBRICATOR

The Goodway Flexible Shaft Lubricator allows for fast, easy protection of flexible shafts in between uses. Simply fill the lubricator with water-soluble lubricant, connect the flexible shaft and attach a compressed air line [maximum 10,3 BAR – quick connect fits Goodway air line #ASH-B50-A – see page 18]. The flow of air and lubricant displaces water and coats the shaft core to protect it from harmful rust and corrosion. Lubricant flushes out with water when shaft is used again.

GSL-705 Flexible Shaft Lubricator with quick connect
GSL-LU1 Lubricant for flexible shaft lubricator, 0,5 liter bottle


FLEXIBLE SHAFT LUBRICATOR

LUBRICANT

Tube Cleaner Accessories

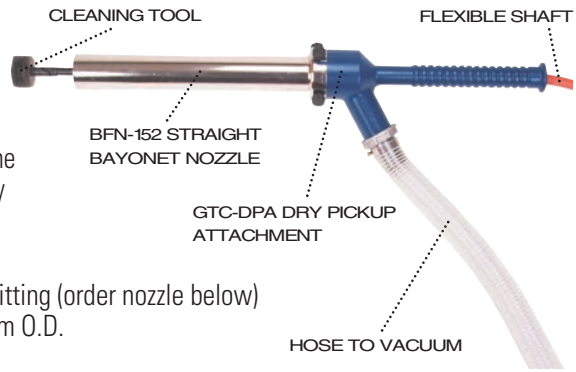
CHILLER BIB®

The Goodway Chiller Bib captures dirty water and debris during tube cleaning operations, saving time and money on post-job cleanup. The unit consists of a 610 mm wide x 300 mm deep reusable aluminum frame and a disposable poly bag. It features two oversized soft nylon brushes, which slide into the chiller's tubes, to securely fasten the Chiller Bib to the tube sheet. These brushes also slide in channels on the frame, allowing it to move across the tube sheet for optimum positioning. A double edge combination of an EPDM gasket with a strip of underlying nylon bristles provides for a snug fit against an irregular tube sheet. The poly bag is equipped with a 7,6 m integrated hose to funnel the water and debris to the nearest drain.

9401-3 Chiller Bib Bag (package of three)
BIB-KIT-3 Chiller Bib Frame with three Chiller Bib Bags
BAG-KIT-10 Chiller Bib Bag (package of ten)

DRY PICKUP ATTACHMENT

The GTC-DPA can be used with the RAM-4X, RAM-4X2A, AWT-100 and AWT-100X Tube Cleaners for the recovery of dry deposits. After connecting the vacuum the operator simply inserts a special dry application flexible shaft (GTC-721, GTC-721G or GTC-821) through the Dry Pickup Attachment and into the tube. While the operator feeds the rotating shaft through the tube, the cleaning tool breaks up deposits which are immediately pulled into the vacuum drum.



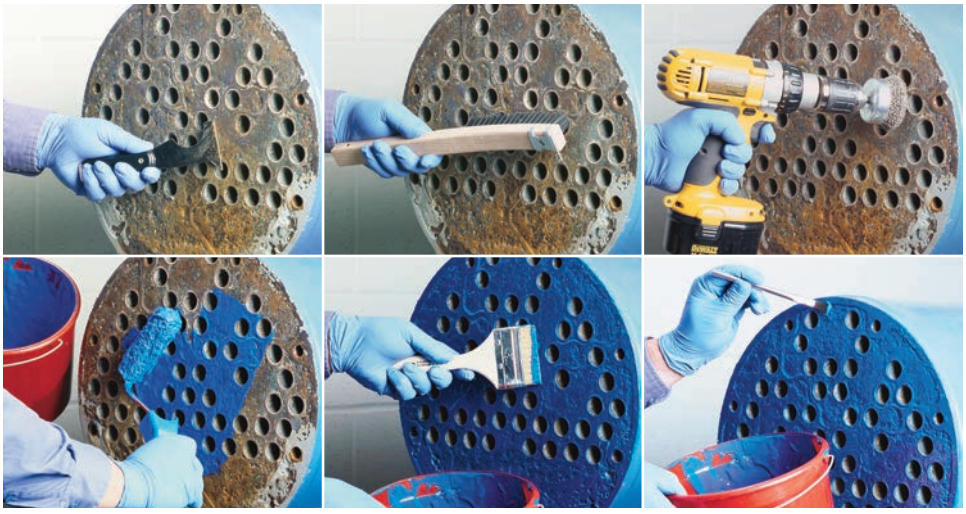
Note: To order flexible shafts, cleaning tools and vacuum, see pages 29, 32-33.

GTC-DPA Dry Pickup Attachment, including 51 mm x 3,7 m hose with quick connect fitting (order nozzle below)
BFN-152S Straight Bayonet Nozzle, 460 mm long for tubes 35, 41, 51, 64, 76 or 89 mm O.D.
BFN-152SA Straight Bayonet Nozzle, 460 mm long for tubes 102 mm O.D.

TUBE SHEET REFACING KIT

The Goodway Tube Sheet Re-Facing Kit contains all the materials you need to recondition up to 3,7 sq m of tube sheet. After thoroughly cleaning the surface of the tube sheet, simply mix the two part epoxy and apply to the tube sheet with a roller or brush. Once mixed, you will have approximately 45 minutes to apply the epoxy to the tube sheet. The epoxy is a 100% solids coating and will provide superior protection to the tube sheet.

TSRK Tube Sheet Re-Facing Kit including 2 liters of base epoxy and 1 liter of hardener to recondition up to a 3,7 sq m area, mixing bucket with stick, scraper, steel brush, cup brush (for use with a drill – not included), two mini rollers with frame, 75 mm bristled brush, detail brush, coverall suit, nitrile gloves and a plastic tarp all in a 19 liter bucket



BRASS TUBE PLUGS

Got a leaky tube? Plug it with the original solution that always works, a one piece tapered brass tube plug. When installed properly tapered brass tube plugs can stay in place for years. Precision engineered, Goodway Brass Tube Plugs are ideal for a wide range of tube applications, and should be driven into the tube with a hammer just far enough to form a seal. They are manufactured in sizes to cover chiller and heat exchanger tubes 15,9 mm, 19,1 mm, 22,2 mm or 25,4 mm O.D. with BWG ranges 15 to 22.

TP-062S Brass Tube Plug for tubes 15,9 mm O.D. with BWG ranges 15 to 22
TP-075S Brass Tube Plug for tubes 19,1 mm O.D. with BWG ranges 15 to 22
TP-087S Brass Tube Plug for tubes 22,2 mm O.D. with BWG ranges 15 to 22
TP-100S Brass Tube Plug for tubes 25,4 mm O.D. with BWG ranges 15 to 22

ADJUSTABLE SILICONE TUBE PLUGS

Designed to conform to almost any inside tube surface, including coated tubes, and designed to not damage tube walls, these adjustable tube plugs provide a versatile option when it becomes necessary to plug tubes. Brass or stainless steel nuts and bolts, vulcanized silicone rubber and high performance plastic make materials compatibility a non issue. Available in single seal configurations for lower pressure applications (less than 4,1 BAR) or double seal configuration for higher pressure applications (up to 10 BAR), these plugs are designed for long life at high temperatures, in fresh or salt water.Installation and removal is easy. Pre-set torque wrenches make proper instillation fool-proof.They are manufactured in sizes to cover chiller and heat exchanger tubes 15,9 mm, 19,1 mm, 22,2 mm, 25,4 mm, 29 mm or 32 mm O.D. with BWG ranges 18 to 25.

TP-ADJ-B Adjustable Silicone Tube Plug with brass nuts and bolt
TP-ADJ-S Adjustable Silicone Tube Plug with stainless steel nuts and bolt
TP-ADJ-TW-SM T-Handle Torque Wrench for 15,9 mm to 19,1 mm O.D. plugs, preset to 17 in. lbs.
TP-ADJ-TW-LG T-Handle Torque Wrench for 22,2 mm to 32 mm O.D plugs, preset to 33 in. lbs.
Note: Additional style and size Tube Plugs available.

TUBEGUARD® TUBE FILTERS

Asian clams, Zebra mussels, pipe scale, sticks, rocks, leaves, water line slag and other debris can restrict water flow and reduce heat exchanger efficiency. Goodway TubeGuard tube filters help maintain heat exchanger efficiency by preventing much of these materials from entering the tubes. These durable polypropylene filters feature several large openings, designed to help prevent macro fouling by capturing only the debris that would clog the tubes, allowing the smaller debris to harmlessly pass through the tubes. They have a short profile which provides for less buildup of debris on the tube sheet and easier cleaning.

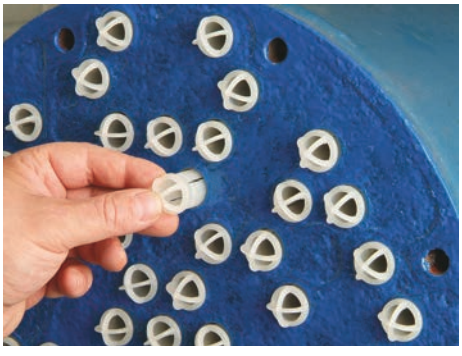
FEATURES

> Polypropylene construction
> Large openings to keep out larger, tube clogging debris and to allow the passage of water
> Short profile for less debris buildup on the tube sheet providing for easier cleaning

Call for prices and quantity discounts

Tube Guards

Part Number	Tube O.D.	Gage	Tube I.D.
TG-087-18	22,2 mm	18	19,7 mm
TG-087-20	22,2 mm	20	20,4 mm
TG-100-18	25,4 mm	18	22,9 mm
TG-100-20	25,4 mm	20	23,6 mm
TG-112-18	28,6 mm	18	26,1 mm
TG-112-20	28,6 mm	20	26,8 mm
TG-112-22	28,6 mm	22	27,2 mm

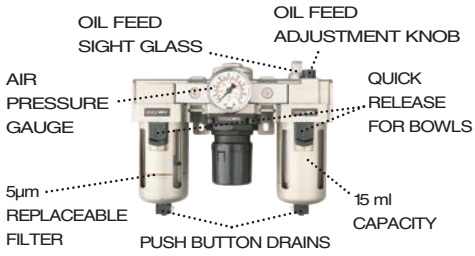


FLEXIBLE FIBERGLASS ROD

Each Flexible Fiberglass Rod is equipped with a brass tip and is ideal for removing foreign material stuck inside tubes. Custom lengths are available.

QS-ROD-45 Flexible Fiberglass Rod, 13,7 m
QS-ROD-65 Flexible Fiberglass Rod, 19,8 m
Note: Custom lengths available.

Tube Cleaner Accessories Continued



AIR LUBRICATOR, FILTER AND REGULATOR

Air-operated equipment will last longer and run more efficiently with proper treatment of the air supply.

Note: All modules have ½" npt ports. Maximum pressure 10,3 BAR. Maximum temperature 60°C. Air displacement 238 m³/h.

GTC-705-4 Combination Air Lubricator, Filter and Regulator

AIR SUPPLY HOSE

AIR SUPPLY HOSES

Made from 13 mm I.D. x 15,2 m abrasion resistant black rubber, Goodway Air Supply Hoses provide high CFM airflow to pneumatic machinery for maximum power. They can be used for a variety of industrial applications.

Note: Maximum pressure 13,8 BAR.

ASH-B50-A Air Supply Hose for AWT-100 and GSL-705
ASH-B50-G Air Supply Hose for AWT-100X, JCL JetLaunch®, JL JetLoad®, LD-2X2 and QS-300 Quick Shot
ASH-B50-P Air Supply Extension Hose for PSM-500
ASH-B50-E Air Supply Extension Hose for all hoses listed above

WATER SUPPLY HOSE

WATER SUPPLY HOSE

Made from 16 mm I.D. x 15,2 m abrasion resistant red rubber, the Goodway Water Supply Hose provides higher GPM waterflow than conventional 13 mm I.D. garden hoses. High flow is important for adequate flushing of tubes and for providing sufficient volume to all Goodway equipment. Use with water up to 28°C. Stays flexible to -32°C. It is ideal for any application requiring a high flow, high quality hose.

Note: Maximum pressure 10,3 BAR.

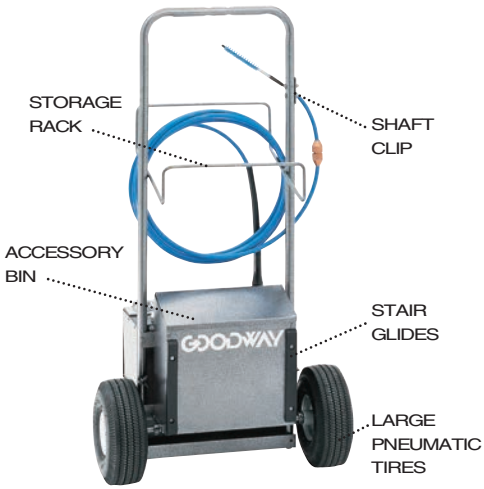
WSH-R50 Red Rubber Water Supply Hose

CARRYING BAG

CARRYING BAG

This heavy-duty 660 mm diameter carrying bag will fit all size flexible shafts as well as some basic accessories.

SB-26 Carrying Bag



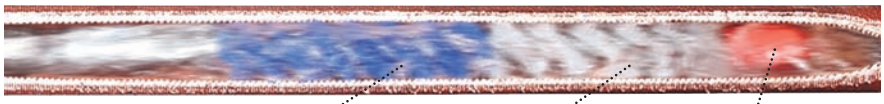
HEAVY-DUTY CONTRACTOR DOLLY

The Goodway Heavy-Duty Contractor Dolly is designed for use with all RAM-4, RAM-4X, RAM-5SF, RAM-6, AWT-100X and AQ-R1500 Machines. It features an increased height, large pneumatic tires and bumpers for easier maneuverability and stair climbing ability, a storage rack for flexible shafts and water hoses, and a large storage bin with drainage for brushes and other accessories.

RAM-DOLLY-C Heavy-Duty Contractor Dolly

Brushes and Tools 6,4 mm to 25,4 mm

BRUSHES FOR INTERNALLY ENHANCED TUBES

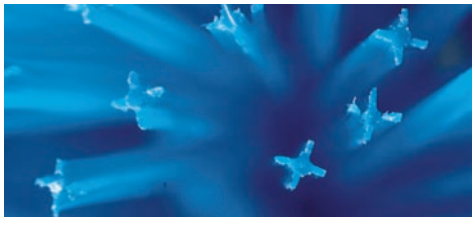


ENN-062-Q The "Patriot" Dual Diameter Nylon Brush for tubes 15,9 mm I.D.
ENN-090-Q The "Patriot" Dual Diameter Nylon Brush for tubes 23,8 mm I.D.

The"Patriot®" Dual Diameter Nylon Brush:
The"Patriot" Dual Diameter Nylon Brush is recommended for removing soft deposits (mud, algae, etc.) in straight, ferrous and nonferrous internally enhanced tubes. The large diameter end of this brush cleans into the grooves while its small diameter end cleans the lands of the tube's rifling. **Available in Bags of 25**

ESGB-Q-050 Dual Diameter Spin-Grit Brush for tubes 12,7 mm I.D.
ESGB-Q-062 Dual Diameter Spin-Grit Brush for tubes 15,9 mm I.D.
ESGB-Q-075 Dual Diameter Spin-Grit Brush for tubes 19,1 mm I.D.
ESGB-Q-100 Dual Diameter Spin-Grit Brush for tubes 25,4 mm I.D.

Dual Diameter Spin-Grit Brushes:
The Dual Diameter Spin-Grit Brushes is recommended for removing soft and light scale deposits in straight, ferrous and nonferrous internally enhanced tubes. The small diameter end of this brush cleans into the grooves while the large diameter end cleans the lands of the tube's rifling. **Available in Bags of 15**



GTC-211Q Blue Nylon Brushes, 6,4 to 25,4 mm (in 1,6 mm increments)

BRUSHES FOR SMOOTH BORE TUBES

4,8 to 25,4 mm Only

Blue Nylon Brushes:
Blue Nylon Brushes are recommended for removing soft deposits (mud, algae, etc.) in straight, ferrous and nonferrous tubes. Brush should be equal to or 1,6 mm smaller than tube I.D.
Available in Bags of 15 or 25 – Depending on Size

SGB-050 Spin-Grit Brush for tubes 6,4 to 9,5 mm I.D.
SGB-Q-075 Spin-Grit Brush for tubes 11,1 to 15,9 mm I.D.
SGB-Q-100 Spin-Grit Brush for tubes 17,5 to 19,1 mm I.D.
SGB-Q-125 Spin-Grit Brush for tubes 20,6 to 25,4 mm I.D.

4,8 to 25,4 mm Only

Spin-Grit Brushes:
Spin-Grit Brushes are recommended for removing soft and light scale deposits in straight, ferrous and nonferrous internally enhanced tubes. **Available in Bags of 15**

ENB-5/8 Bi-fill Brush, 15,9 mm

Note: 6,4 mm and 7,9 mm threaded brushes require a #C-1 Coupling, and 9,5 mm threaded brushes require a #C-2 Coupling to connect to GTC-701 Flexible Shafts. (Couplings supplied with GTC-701 Flexible Shaft order.)

Note: All Goodway brushes and buffing tools are available with standard threaded tool couplings. To order leave off the "Q" in the part number.

15,9 mm Only

Bi-Fill Brushes:
Bi-Fill Brushes are recommended for removing soft and light scale deposits in straight, ferrous and nonferrous tubes. The dual nylon and brass filaments help extend the life of the brush. Brush should be equal to or 1,6 mm smaller than tube I.D. **Available in Bags of 25**

Brushes and Tools 6,4 mm to 25,4 mm Continued

BRUSHES FOR SMOOTH BORE TUBES CONTINUED

4,8 to 25,4 mm Only

Brass Brushes:
Brass Brushes are recommended for removing soft and light scale deposits in straight, ferrous and nonferrous tubes. Brush should be equal to or 1,6 mm smaller than tube I.D.

Available in Bags of 15

GTC-200BQ Brass Brushes, 6,4 to 25,4 mm (in 1,6 mm increments)

4,8 to 25,4 mm Only

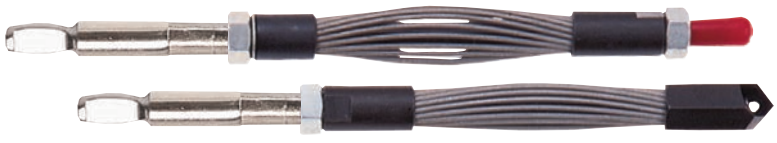
Stainless Steel Brushes:
Stainless Steel Brushes are recommended for removing soft and light scale deposits in straight, ferrous tubes. Brush should be equal to or 1,6 mm smaller than tube I.D.

Available in Bags of 15

GTC-210Q Stainless Steel Brushes, 6,4 to 25,4 mm (in 1,6 mm increments)

BUFFING TOOLS

9,5 to 25,4 mm Only



Stainless Steel Wire Buffing Tools are used for removing light to medium scale deposits or for finishing tubes previously "roughed out" with other cleaning tools. They can be used in straight, ferrous and nonferrous tubes. Buffing tools can only be used in a clockwise (forward) direction and cannot be used in internally enhanced tubes. They are adjustable to a 6,4 mm range.

GTC-203 Buffing Tool for tubes 7,9 to 9,5 mm I.D. **GTC-203DT** Same as GTC-203 with drill tip
GTC-204Q Buffing Tool for tubes 9,5 to 12,7 mm I.D. **GTC-204QDT** Same as GTC-204Q with drill tip

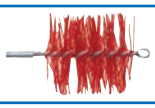
GTC-205Q Buffing Tool for tubes 12,7 to 14,3 mm I.D.
GTC-205QDT Same as GTC-205Q with drill tip
GTC-206Q Buffing Tool for tubes 15,9 to 25,4 mm I.D.
GTC-206QDT Same as GTC-206Q with drill tip
GTC-207 Replacement Metal Blades for GTC-203 and GTC-204
GTC-208A Replacement Metal Blades for GTC-205
GTC-208B Replacement Metal Blades for GTC-206

Accessory	Application	Part No.	Sizes
Adjustable Triangular Scraping Tools	Removing heavy scale deposits in straight, ferrous tubes. They can only be used in a clockwise (forward) direction and cannot be used in internally enhanced tubes. They are adjustable to a 6,4 mm range.	**TST-500** **TST-750**	Triangular Scraper Tool for tubes 12,7 to 19,1 mm I.D. Triangular Scraper Tool for tubes 19,1 to 25,4 mm I.D.
Carbide Drills	Carbide Drills are recommended for cleaning straight, ferrous tubes plugged solidly with deposit.	**PTB-025/037/043/050/056/062/068**	6,4 mm, 9,5 mm, 11,1 mm, 12,7 mm, 14,3 mm, 15,9 mm or 17,5 mm (specify size)
Flex-Hone Abrasive Tools	Flex-Hone Abrasive Tools are light pressure, soft application honing devices for cleaning straight, ferrous tubes. They consist of 180 grit silicon carbide abrasive globules (stones) bonded to high density nylon filaments. Order tool to correspond to tube I.D.	**FHT-025/031/037/043/050/056/062/068/075/087/100**	6,4 mm, 7,9 mm, 9,5 mm, 11,1 mm, 12,7 mm, 14,3 mm, 15,9 mm, 17,5 mm, 19,1 mm, 22,2 mm or 25,4 mm (specify size) *Note: Flex-Hone Abrasive Tools are normally used with a water flush for maximum life.*
Flex Hub Tools	Flex Hub Tools incorporate centrifugally activated blades for removing hard and heavy deposits in straight, ferrous tubes.	**GTC-225** **GTC-225A**	Flex Hub for straight tubes 12,7 to 25,4 mm I.D. Replacement Metal Blades for GTC-225 (set of three)
U-Tube Tools	Consisting of brushes or grinding tips permanently mounted on 460mm sections of flexible shafts, U-Tube Tools are designed to snake partially through each side of a U-bend, to thoroughly clean from both sides.	**CBT-075B** **CBT-075S** **WBT-075B/100B** **WBT-075S/100S** **GTT-050** **GTT-625**	Brass Cup Brush Tool for tubes 12,7 to 19,1 mm I.D. Stainless Steel Cup Brush Tool for tubes 12,7 to 19,1 mm I.D. Brass Wheel Brush, 19,1 mm or 25,4 mm (specify size) Stainless Steel Wheel Brush, 19,1 mm or 25,4 mm (specify size) Grinding Tip Tool, 12,7 mm Grinding Tip Tool, 15,9 mm

Note: 6,4 mm and 7,9 mm threaded brushes require a #C-1 Coupling, and 9,5 mm threaded brushes require a #C-2 Coupling to connect to GTC-701 Flexible Shafts. (Couplings supplied with GTC-701 Flexible Shaft order.)

Note: All Goodway brushes and buffing tools are available with standard threaded tool couplings. To order leave off the "Q" in the part number.

Brushes and Tools 25,4 mm and Up

Accessory	Application	Part No.	Sizes
Nylon Brushes	Removing soft deposits (mud, algae, etc.) in straight, ferrous and nonferrous tubes. Order brush to correspond to tube I.D.	**TCB-N**	32 mm, 38 mm, 44 mm, 51 mm, 57 mm, 64 mm, 70 mm, 76 mm, 83 mm, 89 mm, 95 mm or 102 mm
Brass Brushes	Removing soft and light scale deposits in straight, ferrous and nonferrous tubes. Order brush to correspond to tube I.D.	**TCB-B**	32 mm, 38 mm, 44 mm, 51 mm, 57 mm, 64 mm, 70 mm, 76 mm, 83 mm, 89 mm, 95 mm or 102 mm
Stainless Steel Brushes	Removing soft and light scale deposits in straight, ferrous tubes. Order brush to correspond to tube I.D.	**TCB-S**	32 mm, 38 mm, 44 mm, 51 mm, 57 mm, 64 mm, 70 mm, 76 mm, 83 mm, 89 mm, 95 mm, 102 mm, 108 mm, 114 mm, 121 mm or 127 mm
Dual Diameter Spin Grit Brushes	Removing soft and light scale deposits in straight, ferrous and nonferrous internally enhanced tubes. The small diameter end of this brush cleans into the grooves while the large diameter end cleans the lands of the tube's rifling. Order brush to correspond to tube I.D.	**ESGB-Q-100** **ESGB-Q-125**	25,4 mm 32 mm
Carbon Steel Brushes	Removing soft and light scale deposits in straight, ferrous tubes. Order brush to correspond to tube I.D. (Not recommended for stainless steel tubes.)	**TCB-C**	127 mm, 152 mm, 178 mm, 203 mm, 229 mm, 254 mm, 279 mm, 305 mm, 330 mm or 356 mm
Plastic Brushes 	Removing soft deposits in straight, ferrous and nonferrous tubes. Order brush to correspond to tube I.D.	**TCB-P**	102 mm, 127 mm, 152 mm, 178 mm, 203 mm, 229 mm, 254 mm, 279 mm, 305 mm, 330 mm or 356 mm
Adjustable Buffing Tool	Removing light to medium scale deposits or for finishing tubes previously "roughed out" with other cleaning tools. They can be used in straight, ferrous and nonferrous tubes.	**GTC-223** **GTC-203DT** **GTC-224**	Buffing Tool for tubes 25,4 to 76 mm I.D. Same as GTC-223 with drill tip Replacement Metal Blades for GTC-223
Adjustable Triangular Scraping Tools	Removing heavy scale deposits in straight, ferrous tubes.	**TST-1000** **TST-1500** **TST-2000** **TST-2500**	Triangular Scraper Tool for tubes 25,4 to 38 mm I.D. Triangular Scraper Tool for tubes 38 to 51 mm I.D. Triangular Scraper Tool for tubes 51 to 64 mm I.D. Triangular Scraper Tool for tubes 64 to 76 mm I.D.
Carbide Drills	Carbide Drills are recommended for cleaning straight, ferrous tubes plugged solidly with deposit.	**GTC-231D** **GTC-229** **PTB-100**	19,1 mm 22,2 mm 25,4 mm

WHEEL BRUSH ASSEMBLIES

To order Wheel Brush Assemblies refer to the table (right) listing the type of tubes to be cleaned – straight or curved.

Straight Tube Wheel Brush Assemblies

Recommended for removing soft and light scale deposits in straight, ferrous tubes. Each assembly consists of four stainless steel wire wheel brushes attached to a universal joint. Brushes should be 3,2 to 6,4 mm smaller than tube I.D.

Curved Tube Wheel Brush Assemblies

Recommended for removing soft and light scale deposits in curved, ferrous tubes. Each assembly consists of a single stainless steel wire wheel brush attached to each end of a universal joint. Brushes should be 6,4 to 9,5 mm smaller than tube I.D.

** Note: GTC-706 Coupling required to connect to GTC-720, GTC-721, GTC-721G and GTC-821 Flexible Shafts.*

Straight Tube Wheel Brush Assemblies

Straight Tube I.D.	Wheel Brush Assembly	Actual Brush O.D.	Replacement Brushes
29 to 32 mm	**WBS-100**	25,4 mm	**WBR-100**
35 to 38 mm	**WBS-125**	32 mm	**WBR-125**
41 to 44 mm	**WBS-150**	38 mm	**WBR-150**
48 to 51 mm	**WBS-175**	44 mm	**WBR-175**
54 to 57 mm	**WBS-200**	51 mm	**WBR-200**
60 to 64 mm	**WBS-225**	57 mm	**WBR-225**
67 to 70 mm	**WBS-250**	64 mm	**WBR-250**
73 to 76 mm	**WBS-275**	70 mm	**WBR-275**
79 to 83 mm	**WBS-300**	76 mm	**WBR-300**

Curved Tube Wheel Brush Assemblies

Curved Tube I.D.	Wheel Brush Assembly	Actual Brush O.D.	Replacement Brushes
32 to 35 mm	**WBC-100***	25,4 mm	**WBR-100**
38 to 41 mm	**WBC-125***	32 mm	**WBR-125**
44 to 48 mm	**WBC-150***	38 mm	**WBR-150**
51 to 54 mm	**WBC-175**	44 mm	**WBR-175**
57 to 60 mm	**WBC-200**	51 mm	**WBR-200**
64 to 67 mm	**WBC-225**	57 mm	**WBR-225**
70 to 73 mm	**WBC-250**	64 mm	**WBR-250**
76 to 79 mm	**WBC-275**	70 mm	**WBR-275**
83 to 89 mm	**WBC-300**	76 mm	**WBR-300**

Brushes and Tools 25,4 mm and Up Continued

CONE CUTTER ASSEMBLIES

Cone Cutter Assemblies are designed for removing scale deposits from straight and curved, ferrous tubes. Assemblies should be slightly smaller than tube I.D. The innovative design of the cones ensures a thorough cleaning. In watertube boilers, cone cutters are the most effective cleaning tools for all conditions.

Single and Double Cone Assemblies
Assemblies consisting of one or two cone elements are used for cleaning straight tubes 29 to 59 mm I.D. and curved tubes 32 to 60 mm I.D.

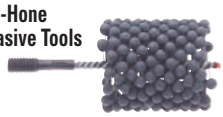
Disc Cone Assemblies
Assemblies consisting of three cone elements are used for cleaning straight tubes 60 to 95 mm I.D. and curved tubes 64 to 102 mm I.D.

Single and Double Cone Assemblies

Straight Tube I.D.	Curved Tube I.D.	Single Cone Assembly	Double Cone Assembly	Replacement Cones
29 to 32 mm	32 to 35 mm	SCA-100	DCA-100	RCO-100
33 to 35 mm	38 to 41 mm	SCA-112	DCA-112	RCO-112
37 to 38 mm	44 to 48 mm	SCA-125	DCA-125	RCO-125
40 to 44 mm	51 to 54 mm	SCA-150	DCA-150	RCO-150
46 to 51 mm	57 to 60 mm	SCA-175	DCA-175	RCO-175
52 to 59 mm	•	SCA-200	DCA-200	RCO-200

Disc Cone Assemblies

Straight Tube I.D.	Curved Tube I.D.	Disc Cone Assembly	Replacement Cones
60 to 71 mm	51 to 78 mm	CDC-101	RCO-100
73 to 84 mm	79 to 92 mm	CDC-102	RCO-100
86 to 95 mm	94 to 102 mm	CDC-103	RCO-112

Accessory	Application	Part No.	Sizes
Drill Cone Assemblies	Cleaning straight, ferrous tubes plugged solidly with deposits. Order assembly to correspond to tube I.D.	DDC-100 DDC-112 DDC-125 DDC-150 DDC-175	25,4 mm 29 mm 32 to 35 mm 38 to 41 mm 44 to 48 mm
Flex-Hone Abrasive Tools 	Flex-Hone Abrasive Tools are light pressure, soft application honing devices for cleaning straight, ferrous tubes. They consist of 180 grit silicon carbide abrasive globules (stones) bonded to high density nylon filaments. Order tool to correspond to tube I.D.	FHT-125/150/175/200 225/250/275/300	32 mm, 38 mm, 44 mm, 51 mm, 57 mm, 64 mm, 70 mm or 76 mm (specify size) *Note: Flex-Hone Abrasive Tools are normally used with a water flush for maximum life.*
Flex Hub Tools	Flex Hub Tools incorporate centrifugally activated blades for removing hard and heavy deposits in straight or curved, ferrous tubes. A drill can be attached to the front of the GTC-227 or GTC-231 Flex Hub to clean severely clogged tubes.	GTC-226 GTC-231 GTC-227 GTC-226A GTC-231A GTC-227A GTC-229 GTC-231D CUJ-002	Flex Hub for straight tubes 22,2 to 38 mm I.D. or curved tubes 25,4 to 44 mm I.D. Flex Hub for straight tubes 38 to 51 mm I.D. or curved tubes 44 to 64 mm I.D. Flex Hub for straight tubes 44 to 102 mm I.D. or curved tubes 64 to 102 mm I.D. Replacement Metal Blades for GTC-226 (set of three) Replacement Metal Blades for GTC-231 (set of three) Replacement Metal Blades for GTC-227 (set of three) Drill to be attached to GTC-227 Flex Hub Drill to be attached to GTC-231 Flex Hub Universal Joint for use with Flex Hubs when minimum tube bend radius is less than 5 x I.D. of the tube (consult factory)
Rigid Arm Flare Cone Tool	Rigid Arm Flare Cone Tools incorporate centrifugally activated, serrated cones for removing light to heavy scale deposits in straight, ferrous tubes. Use in horizontal or vertical tubes.	FCT-300 FCT-301 RCO-100 CRB-001	Flare Cone Tool for tubes 44 to 102 mm I.D. Flare Cone Tool for tubes 102 to 165 mm I.D. Replacement Cone Replacement Cone Retainer Bolt
Flexible Arm Flare Cone Tool	The Flexible Arm Flare Cone Tool incorporates centrifugally activated serrated cones for removing light to heavy scale deposits in straight or curved, ferrous tubes. Most effective results are obtained if tube is in vertical position when cleaning.	FCT-600 RCO-100 CRB-001	Flare Cone Tool for tubes 102 to 305 mm I.D. Replacement Cone Replacement Cone Retainer Bolt
Flare Brushes	Flare Brushes incorporate centrifugally activated wire cables with cobalt tips for light descaling and finishing of straight or curved, ferrous and nonferrous tubes.	FBT-301 FBT-501 FBT-502	Three Strand Flare Brush for tubes 25,4 to 51 mm I.D. Five Strand Flare Brush for tubes 51 to 102 mm I.D. Five Strand Flare Brush for tubes 102 to 203 mm I.D.
Universal Nylon Rod (Flare) Tool	The Universal Nylon Rod (Flare) Tool incorporates centrifugally activated nylon rods for removing light deposits in straight or curved, ferrous and nonferrous tubes.	UFT-005-8	Universal Nylon Rod (Flare) Tool for tubes 51 to 381 mm I.D.

Scale Removal Equipment

FEATURES

> Acid proof pump and fittings
> High flow pump re-circulates quickly
> Portable design maximizes flexibility
> Two circulation hoses
> Venting drum or cap for closed systems

Hands Free Scale Removal System

Reverse Flow Scale Removal System

Reverse Flow Scale Removal System

Specifications	GDS-15-PH	GDS-C40	GDS-C92
Motor Power:	0,6 kW	0,4 kW	0,6 kW
Input Power:	11 Amps, 115 V, 50/60 Hz AC	7,6 Amps, 115 V, 50/60 Hz AC	8,6 Amps, 115 V, 50/60 Hz AC
	Optional 5,5 Amps, 230 V, 50/60 Hz	Optional 3,8 Amps, 230 V, 50/60 Hz	Optional 4,3 Amps, 230 V, 50/60 Hz
Power Supply Cord:	6,4 m, 14-3	5,5 m, 18-3	5,5 m, 16-3
Output Water Flow:	114 LPM	57 LPM	79 LPM
Pump(s):	Noryl Centrifugal Main and	Centrifugal	Centrifugal
	Positive Displacement Diaphragm Chemical	•	•
Tank Capacity:	57 liters	38 liters	57 liters
Hoses:	Two 4,6 m Circulation Hoses	Two 3 m Circulation Hoses	Two 3 m Circulation Hoses
Special Features:	Hands Free Automatic Chemical Pump	Run Dry Ciculation Pump	Run Dry Ciculation Pump
	Venting Drum for Closed Systems	Venting Cap for Closed Systems	Venting Cap for Closed Systems
	Valves for Immersion Tank Re-circulating	Flow Reversal Valve	Flow Reversal Valve
	pH probe with 0,5 liters storage solution	•	•
	Five pH 7,01 Calibration Packets	•	•
	Five pH 4,01 Calibration Packets	•	•
Dimensions:	1.220 mm High x 660 mm Wide x	685 mm High x 380 mm Wide x	890 mm High x 380 mm Wide x
	840 mm Deep	430 mm Deep	585 mm Deep
Weight:	57 kg Net Dry	17 kg Net Dry	23 kg Net Dry

Scale Removal Chemicals

- > DISSOLVES CALCIUM, LIME , RUST AND LITHIUM CARBONATE ON CONTACT
- > LOW FOAMING
- > LESS CORROSIVE
- > ECONOMICAL
- > BIODEGRADABLE

SCALEBREAK®

Goodway's ScaleBreak safely dissolves mineral deposits faster then other liquid descalers on the market. This biodegradable cleaner will quickly dissolve calcium, lime, rust, lithium carbonate and other types of deposits from water passages in water cooled or heated equipment. It is safe for use on steel, iron, brass, copper, plastic and rubber. When used as directed, it will help to improve the operating efficiency and extend the life of your equipment. Fortified with powerful low foaming, wetting and penetrating agents, and superior corrosion inhibitors, it is ideal for use on boilers, chillers, condensers, heat exchangers, oil coolers, cooling towers, furnaces and water piping systems.

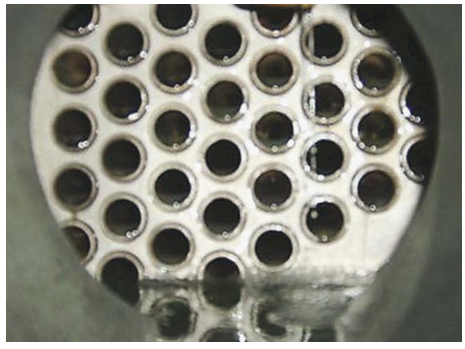
SCALEBREAK-5 Descaling Solution, 19 liter bottle
SCALEBREAK-30 Descaling Solution, 114 liter drum
SCALEBREAK-55 Descaling Solution, 208 liter drum
SCALEBREAK-275 Descaling Solution, 1,041 liter tote
SCALEBREAK-330 Descaling Solution, 1,249 liter tote

SCALEBREAK-SS

Do you have a scaling problem with stainless steel surfaces? Stainless steel calls for a special kind of Scalebreak solution. ScaleBreak-SS contains no HCL and therefore is safe for prolonged exposure to stainless steel. Descaling chemicals using even small amounts of hydrochloric acid will destroy the passivity of stainless steel and could over time lead to stress cracks. Scalebreak-SS is your best and safest bet for all stainless steel applications.

SCALEBRK-SS-5 Stainless Steel Descaling Solution, 19 liter bottle
SCALEBRK-SS-30 Stainless Steel Descaling Solution, 114 liter drum
SCALEBRK-SS-55 Stainless Steel Descaling Solution, 208 liter drum
SCALEBRK-SS-275 Stainless Steel Descaling Solution, 275 gallon tote
SCALEBRK-SS-330 Stainless Steel Descaling Solution, 1,249 liter tote

> Stainless steel heat exchanger before using ScaleBreak-SS.



> Stainless steel heat exchanger after using ScaleBreak-SS.

SCALEBREAK-PT

Certified by NSF to NSF/ANSI Standard 60 for potable water applications. This is a phosphoric acid based de-scaler, similar to ScaleBreak-SS. Great for marine equipment on all types of vessels.

SCALEBRK-PT-5 Potable Applications Descaling Solution, 19 liter bottle
SCALEBRK-PT-30 Potable Applications Descaling Solution, 114 liter drum
SCALEBRK-PT-55 Potable Applications Descaling Solution, 208 liter drum
SCALEBRK-PT-275 Potable Applications Descaling Solution, 1,249 liter tote

Tube Cleaning Drill

FEATURES

> Compact, rugged construction
> Independent air motor and water flow controls to reduce water consumption
> Push button trigger to reduce fatigue

Specifications	PSM-500
Drill Speed:	950 rpm (Free Speed)
Motor Power:	Up to 0,5 kW Depending on
	Air Pressure and Volume
Air Requirements:	Minimum 3,4 BAR at 18 m^3/h
	Maximum 6,2 BAR at 32 m^3/h
Water Requirements:	Minimum 2,1 BAR at 7,6 LPM,
	Maximum 6,9 BAR7,6 LPM
Hoses:	4,6 m Air Hose and 4,6 m Water Hose
Dimensions:	290 mm Long
Weight:	2,5 kg
Optional Carrying Case:	360 mm High x 1.360 mm Wide x
	120 mm Deep

PSM-500

Recommended:
For better air regulation and quality, plus longer motor life, we recommend the combination air lubricator, filter and regulator unit (GTC-705-4).
GTC-705-4 Combination Air Lubricator, Filter and Regulator (see page 16)

GTC-705-4

Optional:
3012-500 Carrying Case, with room for up to eight 1,2 m long hollow drills

CARRYING CASE

See pages 26 for optional equipment and accessories. Call for assistance.

Tube Cleaning Drill Accessories

Accessory	Application	Part No.	Sizes
Blue Nylon Brushes	Removing soft deposits in straight, ferrous and nonferrous tubes. Brush should be equal to or 1,6 mm smaller than tube I.D.	**GTC-211**	6,4 to 25,4 mm (in 1,6 mm increments)
Brass Brushes	Removing soft and light scale deposits in straight, ferrous and nonferrous tubes. Brush should be equal to or 1,6 mm smaller than tube I.D.	**GTC-200B**	6,4 to 25,4 mm (in 1,6 mm increments)
Stainless Steel Brushes	Removing soft and light scale deposits in straight, ferrous . Brush should be equal to or 1,6 mm smaller than tube I.D.	**GTC-210**	6,4 to 25,4 mm (in 1,6 mm increments)
Adjustable Buffing Tool	Removing light to medium scale deposits or for finishing tubes previously "roughed out" with other cleaning tools. They can be used in straight, ferrous and nonferrous tubes. Buffing tools can only be used in a clockwise (forward) direction and cannot be used in internally enhanced tubes. They are adjustable to a 6,4 mm range.	**GTC-203P** **GTC-203PDT** **GTC-205** **GTC-205DT** **GTC-206** **GTC-206DT** **GTC-207/208A/208B**	Buffing Tool for tubes 7,9 to 12,7 mm I.D. Same as GTC-203PDT with drill tip Buffing Tool for tubes 12,7 to 14,3 mm I.D. Same as GTC-205DT with drill tip Buffing Tool for tubes 15,9 to 25,4 mm I.D. Same as GTC-206DT with drill tip Replacement Blades for GTC-203P, GTC-205 and GTC-206 (specify Buffing Tool)
Adjustable Triangular Scraping Tool	Removing heavy scale deposits in straight, ferrous tubes. They can only be used in a clockwise (forward) direction and cannot be used in internally enhanced tubes. They are adjustable to a 6,4 mm range.	**TST-500** **TST-750**	Triangular Scraper Tool for tubes 12,7 to 19,1 mm I.D. Triangular Scraper Tool for tubes 19,1 to 25,4 mm I.D.
Starter Drills	Making pilot holes in deposits of completely clogged tubes.	**GTC-975A** **GTC-975B**	Starter Drill, 4,8 or 6,4 mm Starter Drill, 9,5 mm and up
Hollow Drills	Cleaning severely or completely clogged tubes. (Effective length 840 mm for 0,9 m drills and 1.140 mm for 1,2 m drills.)	**GTC-960-3** **GTC-961-3**	Hollow Drill, 4,8 mm x 0,9 m Hollow Drill, 6,4 mm x 0,9 m *Note: Hollow drills are available in diameters from 3,2 to 19,1 mm up to 1,8 m long.*
Hollow Shafts	Adapt brushes, buffing tools, hollow carbide drills and twist drills to PSM-500.	**GTC-964-3** **GTC-965-3** **GTC-965-KIT** **GTC-989-KIT** **GTC-998**	Hollow Shaft, 0,9 m long with coupling for 6,4 mm brushes *Note: GTC-964 Hollow Shaft is available up to 1,8 m long. To order, change suffix on GTC-964 to length specifications (in feet) beyond 3' (0.9 m) standard (e.g. GTC-964-6 is a 1,8 m Hollow Shaft.)* Hollow Shaft, 0,9 m long with coupling for 7,9 mm brushes, coupling for 9,5 mm brushes, and coupling for 11,1 to 25.4 mm brushes and all buffing tools for 7,9 to 25,4 mm I.D. tubes Hollow Shaft Kit for tubes 7,9 to 12,7 mm I.D. including three 990 mm long hollow extension shafts with couplings to form a 3 m shaft, a 305 mm short hollow extension shaft, coupling to connect shaft to PSM-500 and couplings to connect brushes, buffing tools, hollow carbide drills and twist drills to shaft Hollow Shaft Kit for tubes 14,3 to 25,4 mm I.D. including three GTC-998 Hollow Extension Shafts with couplings to form a 3 m long shaft, a 0,3 m shaft, coupling to connect shaft to PSM-500, coupling to connect brushes, buffing tools, hollow carbide drills and twist drills to shaft, and assembly tools Hollow Extension Shaft, 990 mm long for GTC-989-KIT
Hollow Drill Tips	Hollow Drill Tips attach to Hollow Shafts and are used to clean severely or completely clogged tubes.	**GTC-RWB-031** **GTC-RWB-037** **GTC-RWB-042** **GTC-RWB-050** **GTC-RWB-056** **GTC-RWB-062** **GTC-RWB-075** **GTC-RWB-100**	Hollow Drill Tip, 7,9 mm Hollow Drill Tip, 9,5 mm Hollow Drill Tip, 11,1 mm Hollow Drill Tip, 12,7 mm Hollow Drill Tip, 14,3 mm Hollow Drill Tip, 15,9 mm Hollow Drill Tip, 19,1 mm Hollow Drill Tip, 25,4 mm
Twist Drills	Twist Drills attach to Hollow Shafts and are used to clean severely or completely clogged tubes.	**GTC-TD-031** **GTC-TD-037** **GTC-TD-042** **GTC-TD-050** **GTC-TD-056** **GTC-TD-062** **GTC-TD-075** **GTC-TD-100**	Twist Drill, 7,9 mm Twist Drill, 9,5 mm Twist Drill, 11,1 mm Twist Drill, 12,7 mm Twist Drill, 14,3 mm Twist Drill, 15,9 mm Twist Drill, 19,1 mm Twist Drill, 25,4 mm

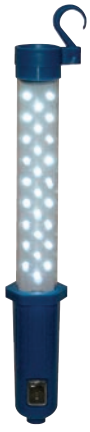
Professional Lights And Accessories

4.5” Pocket Light
This weatherproof Top® pocket light is powered by three AAA batteries. It features 12 energy saving LED bulbs, a shock resistant metal casing, push button sealed rubber switch and carrying strap.

PI-LEDLIGHT

Versatile Task Light
The 6” Streamlight LED flashlight offers superior brightness and a smooth beam made possible by a unique reflective optic inside the lens. There is a high and low setting along with an emergency strobe function that can run for up to 48 hours continuously on just two AA batteries! Its machined aluminum housing features an unbreakable lens and is corrosion and water resistant.

PI-TITANIUM



GoodLight
The cordless, rechargeable GoodLight converts from a work light to a flashlight at the flip of a switch. The low voltage LED lights are cool to the touch, and at full charge will run for up to 30 hours. It features both a magnetic holder and revolving hook for easy placement.

GL-30

Mega Light
This powerful spot light features a 130 watt halogen bulb for extreme illumination. It is powered by a rechargeable 12 V sealed lead acid battery and comes with a swivel stand, removable strap, and 115 V AC to DC charger and 12 V DC car plug charger.

PI-MEGA

Stainless Steel Travel Mug
This insulated stainless steel mug features a twist-on cap with a sliding sip cover to prevent spills. It will keep coffee hot and drinks cold for the maintenance technician on the go.

PI-GMUG

Flex Light
This versatile Streamlight® pocket light has a flexible, insulated cable, allowing up to 14” of reach. Its unbreakable 100,000 hour LED never needs to be replaced. It features a momentary “blink” or constant “on” switch, is waterproof, and comes with a lifetime warranty.

PI-FLEXLIGHT

6.5” Pocket Light
This handy Streamlight pocket light is powered by two AA batteries and will run for over 1 hour. It features a 50,000 hour LED lamp, push button tail cap switch, pocket clip and case.

PI-6.5-LIGHT

Head Lamp
This unique Streamlight work light comes with both elastic and rubber head straps. It runs on three AAA batteries and features 100,000 hour LEDs with three brightness levels. It will run for 150 hours on a single LED.

PI-LAMP

The World's Most Popular Firetube Boiler Cleaner

SAM-3 – Easy Operation

You might as well be burning money if you're allowing soot to collect in your boiler firetubes. At five times the insulating value of asbestos, just a small amount of soot can cause dramatic heat loss and substantially increase fuel consumption. Now in its 3rd generation, the SAM-3 Firetube Boiler Cleaner removes soot and scale in almost no time, enabling your system to run at optimal efficiency. A cleaning tool mounted to a 7,9 m spring steel tape does the dirty work of loosening soot buildup while an in-line vacuum attachment handles clean-up duties. All you have to do is flip the switch. It's that easy. And yes, it's that efficient.

FEATURES

- Spring steel tape
- Auto feed trigger switch
- Brush travel indicator
- Interchangeable cleaning tools
- Simultaneous vacuum to remove deposits
- Carrying handle and stand

Boiler Cleaning Systems (with Vacuums):

SAM-3-20-KIT
Boiler Firetube Punching Machine, including a 50,8 mm x 3,66 m hose, 457,2 mm straight bayonet nozzle (specify diameter), brush and GTC-540-20SS SootVac® Vacuum

SAM-3-15-KIT
Boiler Firetube Punching Machine, including a 50,8 mm x 3,66 m hose, 457,2 mm straight bayonet nozzle (specify diameter), brush and GTC-540-15SS SootVac Vacuum

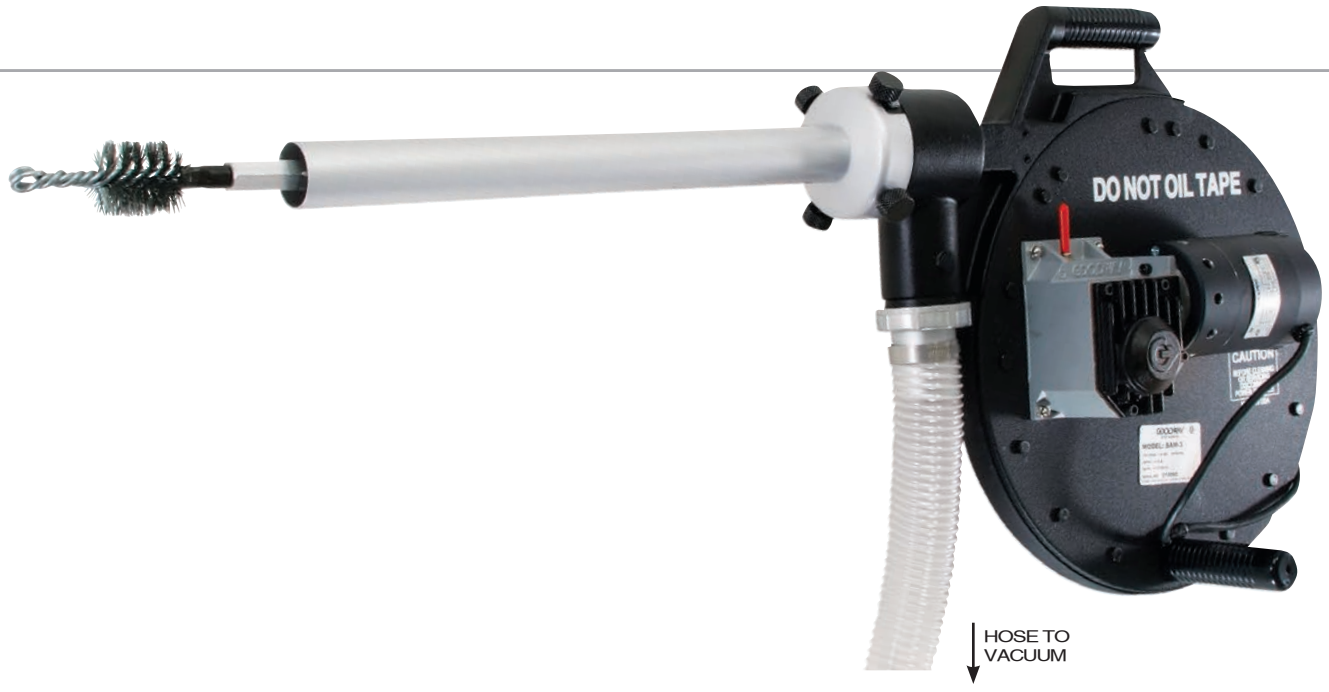
SAM-3-30-KIT
Boiler Firetube Punching Machine, including a 50,8 mm x 3,66 m hose, 457,2 mm straight bayonet nozzle (specify diameter), brush and GTC-540-30DD SootVac Vacuum

SAM-3-55-KIT
Boiler Firetube Punching Mac including a 50,8 mm x 3,66 m hose, 457,2 mm straight bayonet nozzle (specify diameter), brush and GTC-540-55DD SootVac Vacuum

Note: See Tube Sizes Chart on page 29 for nozzle and brush sizes.

Specifications	SAM-3
Motor Power:	.4 kW
Input Power:	Standard: 7 amps, 115 V, 50/60 Hz AC
	Optional: 3.5 amps, 230 V, 50/60 Hz
Tape Length	7,9 m
Power Supply Cord:	7,2 m, 18-3
Vacuum Hose:	51 mm diameter x 3,7 m long
Dimensions:	546 mm long (without nozzle)
Weight:	17.2 kg
Optional Carrying Case:	610 mm (H) x 711 mm (W) x 229 mm (D)

Deposits and Boiler Performance		
Soot in Boiler Tubes	Heat Loss	Increased Fuel Consumption
.8 mm	12%	$2^{1/2}$%
1.5 mm	24%	$4^{1/2}$%
3.3 mm	47%	$8^{1/2}$%



Steel Brushes:

Steel brushes are recommended for removing soot and light scale deposits.

GTC-151 Steel Brushes for tubes 35.1 mm, 41.4 mm, 50.8 mm, 63.5 mm", 76.2 mm, 88.9 mm or 101.6 mm O.D.

FTS Scraper Tools:

FTS Scraper Tools are medium action, spring loaded tools. They are used for removing light scale deposits in boiler firetubes when steel brushes do not remove all deposits. Ferrule extension required.

FTS-200 Scraper Tool for tubes 50.8 mm O.D.

FTS-250 Scraper Tool for tubes 63.5 mm O.D.

FTS-300 Scraper Tool for tubes 76.2 mm O.D.

Ferrule Extensions:

Scraper tools require ferrule extensions. Select the ferrule extension to match the bayonet nozzle in use.

FE-375 Ferrule Extension for scraper tools when using BFN-152 Short Bayonet Nozzles

FE-2100 Ferrule Extension for scraper tools when using BFN-152S or BFN-152SA Straight Bayonet Nozzles

Note: Scraper tools cannot be used with BFN-152X or BFN-152XA Offset Bayonet Nozzles.

Standard Bayonet Nozzles:

BFN-152 Short Bayonet Nozzle, 88.9 mm long for tubes 35.1 mm, 41.4 mm, 50.8 mm, 63.5 mm, 76.2 mm or 88.9 mm O.D.

BFN-152S Straight Bayonet Nozzle, 457,2 mm long for tubes 35.1 mm, 41.4 mm, 50.8 mm, 63.5 mm", 76.2 mm or 88.9 mm O.D.

BFN-152SA Straight Bayonet Nozzle, 457,2 mm long with ferrule extension for tubes 4" O.D.

BFN-152X Offset Bayonet Nozzle, 457,2 mm long for tubes 35.1 mm, 41.4 mm, 50.8 mm, 63.5 mm", 76.2 mm or 88.9 mm O.D.

BFN-152XA Offset Bayonet Nozzle, 457,2 mm long with ferrule extension for tubes 101.6 mm O.D.

Note: Contact factory if longer Straight or Offset Bayonet Nozzlesare needed for your application.

Note: When ordering bayonet nozzles or brushes, specify part number and size according to the table (order by tube O.D.). Bayonet nozzle and brush diameters will fit tube I.D.

Carrying Case:

SC-682 Carrying Case for SAM-3 Boiler Firetube Punching Machine and accessories

SC-682
Carrying
Case

Tube Sizes

Standard Boiler O.D. Size	Approximate Boiler I.D. Size
35.1 mm	32 mm
41.4 mm	38 mm
50.8 mm	44 to 48 mm
63.5 mm	57 to 60 mm
76.2 mm	70 to 73 mm
88.9 mm	83 mm
101.6 mm	95 mm

Package Boilers Cruiserweight Champion

FEATURES

- Preset brush travel
- Dual distance indicators
- Rear-mounted power switch
- Slip clutch
- Quick change tape system for easy maintenance of unit
- Light weight
- Cleans up to 4.9 m long by 50.8 mm – 63.5 mm OD tubes
- Collapsing Brush

SAM-JR

Weighing in at over 9 kg lighter than the SAM-3, the SAM-JR is the cleaning system you need for small gas fired boilers, package boilers or any smaller fire tube boiler with light to moderate soot deposits. SAM-JR's smaller size and weight makes cleaning fire tube boilers in close quarters simple. Plus SAM-JR features a "dial in" tube length and dual distance indicators making tube punching fire tube boilers even easier!

SAM-JR
Firetube Boiler Punching system, including 120 V 50/60 Hz Tube Punching machine, 459.2 mm Straight nozzle and brush (specify tube O.D. of 50.8 mm or 63.5 mm)

SAM-JR-A
Firetube Boiler Punching system, including 230 V 50/60 Hz Tube Punching machine, 459.2 mm Straight nozzle and brush (specify tube O.D. of 50.8 mm or 63.5 mm)

Accessories:

S4-BRUSH-200 Brass Brush for 50.8 mm O.D. tube

S4-BRUSH-250 Brass Brush for 63.5 mm O.D. tube

S4-NOZ-200 459.2 mm Straight Nozzle for 50.8 mm O.D. tube

S4-NOZ-250 459.2 mm Straight Nozzle for 63.5 mm O.D. tube

GTC-170S-QD Hose, 50.8 mm x 3.7 m with sleeve, quick connect and washer for attaching to vacuum cleaner

Specifications	SAM-JR
Motor Power:	.4 kW
Input Power:	Standard: 8 amps, 120 V, 50/60 Hz AC
	Optional: 4 amps, 230 V, 50/60 Hz
Tape Length	4,9 m
Power Supply Cord:	3,7 m, 18-3
Dimensions:	459.2 mm (H) x 203 mm (W) x 584.2 mm (D)
Weight:	9 kg

SOOTVAC®-JR

In SAM-JR's corner collecting all that soot is SootVac-JR. Mounted on a sturdy dolly and weighing only 9 kg, lifting and portability is a breeze. Handling fine soot dust is no problem with a washable high efficiency cartridge filter protected by a 10 micron filter bag ensuring soot stays in the collection tank. Designed for gas fired or light deposits, an inner plastic bag makes collection, sealing and disposal simple. Included accessories make the SootVac-JR a perfect solution for cleanup around the boiler room.

SootVac-JR
Vacuum Cleaner 115 V 50/60 Hz, on 26.5 L stainless steel tank and dolly with 2.4 m hose for connection to the SAM-JR with crevice tool, floor tool, round brush

SootVac-JR -A
Vacuum Cleaner 230 V 50/60 Hz, on 26.5 L stainless steel tank and dolly with 2.4 m hose for connection to the SAM-JR with crevice tool, floor tool, round brush

Accessories:

8052 10 micron filter protector

BV-5-18 Washable high efficiency (to 0.3 micron) cartridge filter

POLY-H-JR-10 Plastic Collection bags, pack of 10.

FEATURES

- 2.4 m collapsible hose
- Disposable plastic collection bag
- 10 micron filter protector
- Washable high efficiency 0.3 micron cartridge filter
- Stainless steel tank and carry handle
- Dolly

Specifications	SootVac-JR
Motor Power:	.7 kW
Input Power:	Standard: 6.7 amps, 115 V, 50/60 Hz AC
	Optional: 4 amps, 230 V, 50/60 Hz
Power Supply Cord:	1,8 m, 18-3
Static Water Lift:	1524 mm
Air Displacement:	100 CFM
Filtration:	10 micron filter protector high efficiency
	(to 0.3 micron) cartridge filter
Tank:	26.5 L
Dry Capacity:	15.14 L
Noise Level:	89 dBA
Dimensions:	508 mm diameter tank x 609.6 mm high
Weight:	9 kg

Rotary Firetube Boiler Cleaners

TubeGuard™ BLRX:
While performing routine maintenance or emergency stoppage work, the waterside of fire tubes boiler systems generally remain exposed to standing water, causing corrosion to form quickly on tube walls. This quickly reduces heat transfer efficiency and overall system performance. TubeGuard-BLRX sticks offer immediate treatment of water to protect tubes against corrosion. Simple and effective. Apply 4 sticks per 111.855 kW of boiler capacity.

TUBEGUARD BLRX Solid chemical form, multi-functional corrosion inhibitor/lay-up treatment. One resealable tube, package of four chemical sticks.

Heavy-Duty RAM Tube Cleaner

Heavy-Duty RAM Tube Cleaner

Specific Models Only

Specific Models Only

FEATURES

> Stainless steel construction
> Quick connect threadless shaft manifold
> Interchangeable cleaning tools
> Integrated dolly
> Simultaneous vacuum
> Foot switch activation

Flexible Shafts (Covered Steel Casing) for Tubes 25,4 mm I.D. and Up

GTC-721-15 Flexible Shaft, 4,6 m
GTC-721-25 Flexible Shaft, 7,6 m
GTC-721-35 Flexible Shaft, 10,7 m
GTC-721-50 Flexible Shaft, 15,2 m

Flexible Shafts (Heat Resistant 149°C Rigid Covered Steel Casing) for Tubes 25,4 mm I.D. and Up

GTC-721G-15 Flexible Shaft, 4,6 m
GTC-721G-25 Flexible Shaft, 7,6 m
GTC-721G-35 Flexible Shaft, 10,7 m
GTC-721G-50 Flexible Shaft, 15,2 m

Flexible Shafts (High Temperature Tolerant 232°C Stainless Steel Casing) for Tubes 25,4 mm I.D. and Up

GTC-821-15 Flexible Shaft, 4,6 m
GTC-821-25 Flexible Shaft, 7,6 m
GTC-821-35 Flexible Shaft, 10,7 m
GTC-821-50 Flexible Shaft, 15,2 m

Spring Filled Brushes:
Spring Filled Brushes are recommended for removing heavy scale deposits. The spring bristles dig into the scale, breaking it free from the tube wall.

SFB-200 Spring Filled Brushes for tubes 35, 41, 51, 64 or 76 mm O.D.
SFB-300 Spring Filled Brushes for tubes 51 or 76 mm I.D.

Specifications	RAM-4X	RAM-4X2A
Application:	Smooth Bore Tubes/Pipes/Hoses	Smooth Bore Tubes/Pipes/Hoses
Tube Size Range:	25,4 mm I.D. and Up	25,4 mm I.D. and Up
Motor Power:	0,7 kW	1,5 kW
Input Power:	13 Amps, 115 V, 60 Hz AC	11,5 Amps, 230 V, 60 Hz AC
	Optional 13 Amps, 115 V, 50 Hz;	Optional 11,5 Amps, 230 V, 50 Hz
	6,5 Amps, 230 V, 60 Hz;	•
	or 6,5 Amps, 230 V, 50 Hz	•
Power Supply Cord:	6,5 m, 14-3 GFCI	6,5 m, 14-3 GFCI
Shaft Speed:	1.725 RPM (Optional: 862,5)	1.725 RPM (Optional: 862,5)
Shaft Feed Method:	Manual	Manual
Shaft Length:	Maximum 22,9 m	Maximum 22,9 m
Water Requirements:	Minimum 2,1 BAR at 11,4 LPM	Minimum 2,1 BAR at 11,4 LPM
Special Features:	Optional Vacuum Attachment	Optional Vacuum Attachment
Dimensions:	940 mm High x 510 mm Wide x	940 mm High x 510 mm Wide x
	430 mm Deep	430 mm Deep
Weight:	27 kg	35 kg

Dry Pickup Attachment:
GTC-DPA Dry Pickup Attachment, including 51 mm x 3,7 m hose with quick connect fitting (order nozzle below)

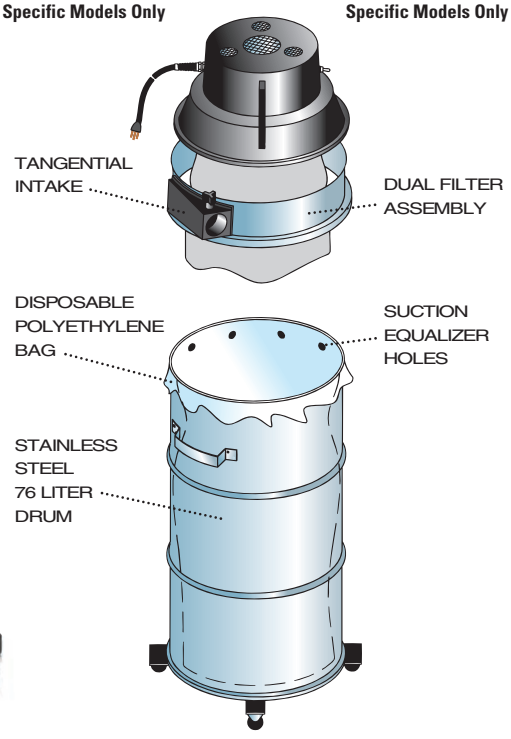
Bayonet Nozzles:
BFN-152S Straight Bayonet Nozzle, 460 mm long for tubes 35, 41, 51, 64, 76 or 89 mm O.D.

BFN-152SA Straight Bayonet Nozzle, 460 mm long for tubes 102 mm O.D.

SootVac® Soot Recovery Vacuum

Specific Models Only

Specific Models Only



FEATURES

> Two heavy-duty motors
> Exhaust muffler (only 82 dBA)
> Reusable filters
> Four tank sizes
> 40 mm or 50 mm hoses

Specifications	GTC-540-20
Motor Power:	1,7 kW
Input Power:	14 Amps, 115 V, 50/60 Hz AC
	Optional: 7 Amps, 230 V, 50/60 Hz AC
Power Supply Cord:	11,3 m, 14-3
Static Water Lift:	1,3 m
Air Displacement:	459 m³/h
Filtration:	15 Microns Polypropylene/Dacron
Tank:	76 Liters Stainless Steel
Dry Capacity:	76 Liters
Noise Level:	78 dBA
Special Features:	Polyethylene Tank Liner
	Disposable Collection Bag
Dimensions:	430 mm Diameter Tank x 1,2 m High
Weight:	32 kg

Attachments:

VAC-049QD Steel Crevice Tool with quick connect
GTC-167 Cleanup Tool with quick connect
GTC-167R Replacement Bristle for GTC-167 Cleanup Tool
GTC-168 Flat Surface Paw Scraper Tool with quick connect
GTC-170 Replacement Hose, 50 mm x 3,7 m for Soot-A-Matic
GTC-170SQD Hose, 50 mm x 3,7 m with sleeve, quick connect and washer

Replacement Filters, Drum Liner and Bags:

GTC-175 Polypropylene Filter
GTC-176 Dacron Filter
PDL-30 High Density Polyethylene Liner for 76 or 114 liter drum
POLY-20-25 Disposable Polyethylene Bag (package of 25) for 76 liter drum
POLY-30-25 Disposable Polyethylene Bag (package of 25) for 114 liter drum

QuickShot® Surface Condenser Tube Cleaner

FEATURES

> Compact
> Power assisted trigger
> Automatic pressure relief system
> Rugged construction

Specifications	QS-300
Application:	Smooth Bore Tubes
Tube Size Range:	15,9 mm to 38 mm O.D.
Air Requirements:	3,4 to 10,3 BAR at 85 m³/h
Water Requirements:	Maximum 10,3 BAR at 19 LPM
Special Features:	Air Powered
	Water Flush
Hoses:	3 m Air and 3 m Water
Dimensions:	230 mm Long
Weight:	1,4 kg, Net Dry

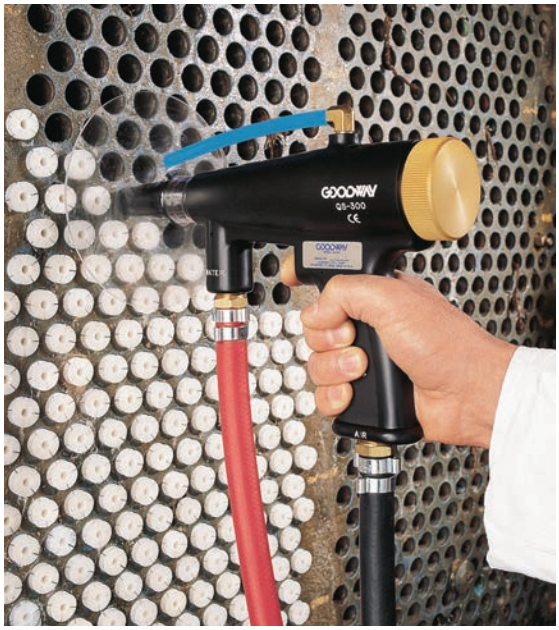
Optional:

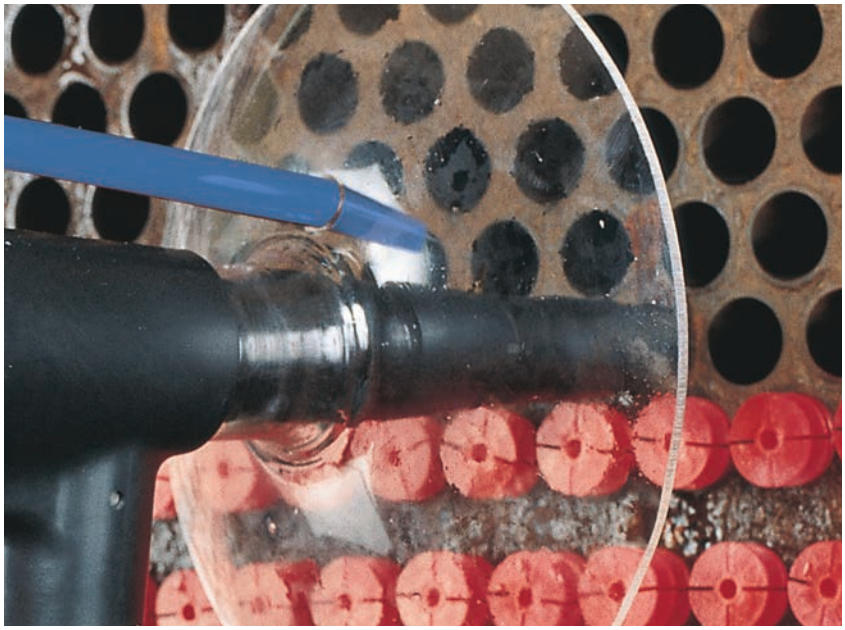
QA-1051 Replacement Nozzle

QA-1051-12 Extension Nozzle, 305 mm long

QSP-1212 Mesh Tarp, 3,7 m high x 3,7 m wide

TH Tarp Holder, 15,9 mm, 19,1 mm, 22,2mm or 25,4 mm, 16 to 18 or 19 to 22 gage (specify size)

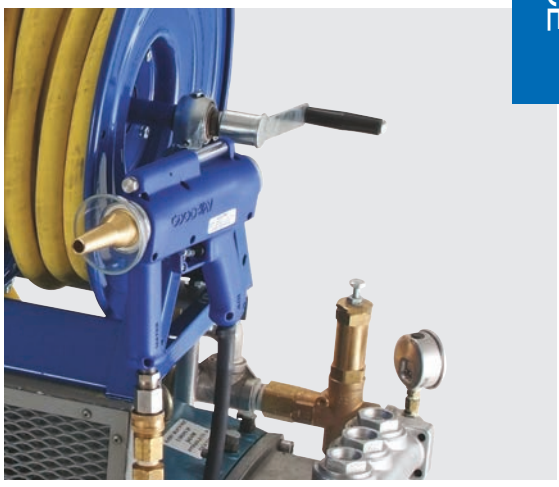




BigShot® Surface Condenser Tube Cleaner Gun

FEATURES

> One- or two-handed use
> Rugged ABS outer shell
> Air-assisted trigger
> Removable aluminum stock
> Compact, ergonomic design
> Easily interchangeable nozzles
> Clear, removable splash shield
> Reliable cleared tube indicator
> Flow rate up to 190 LPM
> Internal vacuum break



Specifications	BSL-50
Application:	Smooth Bore Tubes
Tube Size Range:	15,9 mm to 38 mm O.D.
Air Requirements:	6,2 to 10,3 BAR at 1,7 m^3/h
Water Requirements:	Maximum 41 BAR at 189 LPM
Special Features:	Air Powered
	Water Flush
	Quick Connect Hose Fittings
Hoses:	3 m Air and 3 m Water
Dimensions:	300 mm Long
	(560 mm Long with Shoulder Stock)
Weight:	1,8 kg, Net Dry
	(2,3 kg with Shoulder Stock)

Optional:

BSL-NOZZLE Replacement Nozzle

BSL-OFFNOZ 45° Nozzle

QA-1383 Replacement Shield

QSP-1212 Mesh Tarp, 3,7 m high x 3,7 m wide

TH Tarp Holder, 15,9 mm, 19,1 mm, 22,2mm or 25,4 mm, 16 to 18 or 19 to 22 gage (specify size)

BigShot® Surface Condenser Tube Cleaner

FEATURES

> Two gun pump
> Comfort grip guns
> Rugged construction
> Up to 28 BAR

Specifications	BFP-3510
Application:	Smooth Bore Tubes
Tube Size Range:	15,9 mm to 38 mm O.D.
Motor Power:	7,5 kW
Input Power:	26 Amps, 230 V, 50/60 Hz AC, Three Phase
	Optional 13 Amps, 460 V, 50/60 Hz, Three Phase;
	or 12 Amps, 380 V, 50/60 Hz, Three Phase
Power Supply Cord:	7,6 m, 12-4
Water Requirements:	1,4 to 4,8 BAR at 132 LPM
Output Water Pressure:	19 to 28 BAR at 132 LPM
Hoses:	50 mm x 15,2 m Inlet and 20 mm x 15,2 m Outlet
Pump:	Triplex Plunger in Oil Bath
Dimensions:	1.016 mm High x 800 mm Wide x 1.520 mm Deep
Weight:	272 kg, Net Dry

Optional:

QSP-1212 Mesh Tarp, 3,7 m high x 3,7 m wide

TH Tarp Holder, 15,9 mm, 19,1 mm, 22,2mm or 25,4 mm, 16 to 18 or 19 to 22 gage (specify size)

Tube Cleaning Projectiles

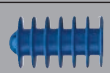
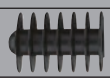
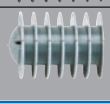
TUBE SCRUBBERS

Goodway Tube Scrubbers are the ultimate design in tube cleaning devices. They are available in sizes to fit tubes 15,9 to 32 mm O.D. When shot with a QS-300 Quick Shot Tube Cleaning Gun they provide the fastest method for removing soft deposits from tubes.

FEATURES

> Seven scraping disks to prevent streaks
> Buoyant for easy cleaning and retrieval
> Color-coded for easy identification
> Reusable

TUBE SCRUBBERS

	Part Number	Color	Type	Tube I.D. Range (mm)
	TS-560-S	Yellow	Soft	12,57 to 13,74
	TS-560	Yellow	Hard	13,39 to 14,10
	TS-630-S	Brown	Soft	14,50 to 15,75
	TS-630	Brown	Hard	15,00 to 16,00
	TS-695-S	Red	Soft	15,75 to 17,15
	TS-695	Red	Hard	16,56 to 17,63
	TS-750-S	Purple	Soft	16,76 to 18,54
	TS-750	Purple	Hard	18,03 to 19,05
	TS-825-S	White	Soft	18,54 to 20,32
	TS-825	White	Hard	19,74 to 20,80
	TS-870-S	Green	Soft	19,81 to 21,59
	TS-870	Green	Hard	20,96 to 22,10
	TS-960-S	Blue	Soft	22,10 to 23,98
	TS-960-M	Blue	Medium	22,50 to 24,13
	TS-960	Blue	Hard	22,91 to 24,28
	TS-1100-S	Black	Soft	25,40 to 27,56
	TS-1100	Black	Hard	26,09 to 28,09
	TS-1250-S	Gray	Soft	27,94 to 30,23
	TS-1250	Gray	Hard	30,23 to 31,75

All Tube Scrubbers are available in either soft or hard material to cover the complete range of tube sizes and most tube cleaning conditions. In most cases hard Tube Scrubbers are recommended. On the lower end of the hard Tube Scrubber size range, in extreme conditions, the user may have to use soft Tube Scrubbers.

Bi-DIRECTIONAL STAINLESS STEEL TUBE BRUSHES

Goodway Bi-Directional Stainless Steel Tube Brushes provide a unique combination of aggressive brushing and wiping action. They are color coded for easy identification, feature stainless steel bristles set in a coil, and capped at both ends by three wiping blades. They are ideal for removing medium to hard deposits from condenser and component heat exchanger tubes.

FEATURES

> Bi-directional for easy loading
> Hybrid Design for maximum cleaning power
> Color-coded for easy identification
> Reusable

Bi-directional Stainless Steel Tube Brushes are available for tubes 22,2 to 25,4 mm O.D.with BWG ranges 16-22.

BI-DIRECTIONAL STAINLESS STEEL TUBE BRUSHES

	Part Number	Piston Color	Tube O.D.	Gage	Tube I.D.
	CBS-075-18	Black	19.05 mm	18	16.56 mm
	CBS-075-20	Red	19.05 mm	20	17.27 mm
	CBS-075-22	Blue	19.05 mm	22	17.63 mm
	CBS-087-18	White	22,2 mm	18	19,74 mm
	CBS-087-20	Red	22,2 mm	20	20,45 mm
	CBS-087-22	Blue	22,2 mm	22	20,80 mm
	CBS-100-16	Yellow	25,4 mm	16	22,10 mm
	CBS-100-18	White	25,4 mm	18	22,91 mm
	CBS-100-20	Red	25,4 mm	20	23,62 mm
	CBS-100-22	Blue	25,4 mm	22	23,98 mm
	CBS-112-18	Black	28.57 mm	18	26,08 mm
	CBS-112-20	Red	28.57 mm	20	26,79 mm
	CBS-112-22	Blue	28.57 mm	22	27,15 mm
	CBS-125-18	Black	31.75 mm	18	29,26 mm
	CBS-125-20	Red	31.75 mm	20	29,97 mm
	CBS-125-22	Blue	31.75 mm	22	30,32 mm

NYLON COILED BRUSHES

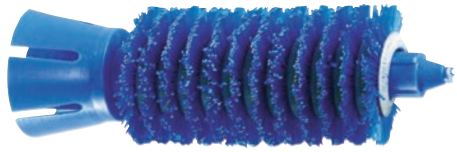
Goodway Nylon Coiled Tube Brushes incorporate a revolutionary piston design. They feature durable nylon bristles set in a coil, wrapped around a wear resistant polymer core. Superior to wooden dowel cores, Goodway's piston design allows the brushes to be quickly inserted into the tubes and helps maximize the cleaning effectiveness of the bristles. They are ideal for removing soft to medium deposits from condenser and component heat exchanger tubes.

COILED BRUSHES

Part Number	Piston Color	Tube O.D.	Gage	Tube I.D.
CB-062-18	White	15,9 mm	18	13,39 mm
CB-075-18	White	19,1 mm	18	16,56 mm
CB-075-20	Red	19,1 mm	20	17,27 mm
CB-075-22	Blue	19,1 mm	22	17,63 mm
CB-087-18	White	22,2 mm	18	19,74 mm
CB-087-20	Red	22,2 mm	20	20,45 mm
CB-087-22	Blue	22,2 mm	22	20,80 mm
CB-100-16	Yellow	25,4 mm	16	22,10 mm
CB-100-18	White	25,4 mm	18	22,91 mm
CB-100-20	Red	25,4 mm	20	23,62 mm
CB-100-22	Blue	25,4 mm	22	23,98 mm

FEATURES

> Piston design for maximum speed
> Color-coded for easy identification
> Reusable

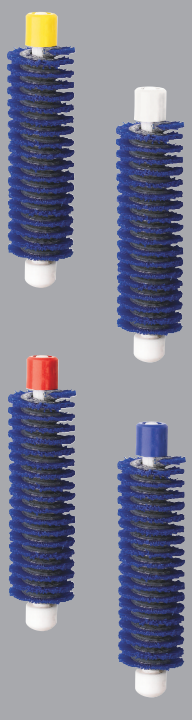


Nylon Coiled Tube Brushes are available for tubes 15,9 to 32 mm O.D. with BWG ranges 16 to 22.

BI-DIRECTIONAL COILED BRUSHES

Goodway Bi-Directional Coiled Tube Brushes can be shot from either end. They are color coded for easy identification and feature durable nylon bristles set in a coil, wrapped around a wear resistant 75 mm polymer core. This design allows the brushes to be quickly inserted into the tubes, with out regard to direction, and helps maximize the cleaning effectiveness and the life of the bristles. They are ideal for removing soft to medium deposits from condenser and component heat exchanger tubes.

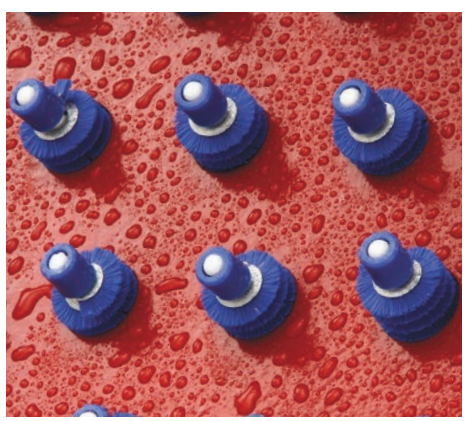
BI-DIRECTIONAL COILED BRUSHES



Part Number	Piston Color	Tube O.D.	Gage	Tube I.D.
CB3-087-18	White	22,2 mm	18	19,74 mm
CB3-087-20	Red	22,2 mm	20	20,45 mm
CB3-087-22	Blue	22,2 mm	22	20,80 mm
CB3-100-16	Yellow	25,4 mm	16	22,10 mm
CB3-100-18	White	25,4 mm	18	22,91 mm
CB3-100-20	Red	25,4 mm	20	23,62 mm
CB3-100-22	Blue	25,4 mm	22	23,98 mm
CB3-112-16	Yellow	29 mm	16	25,27 mm
CB3-112-18	White	29 mm	18	26,09 mm
CB3-112-20	Red	29 mm	20	26,80 mm
CB3-112-22	Blue	29 mm	22	27,15 mm
CB3-125-16	Yellow	32 mm	16	28,45 mm
CB3-125-18	White	32 mm	18	29,26 mm
CB3-125-20	Red	32 mm	20	29,97 mm
CB3-125-22	Blue	32 mm	22	30,33 mm
CB3-137-16	Yellow	35 mm	16	31,62 mm
CB3-137-18	White	35 mm	18	32,44 mm
CB3-137-20	Red	35 mm	20	33,15 mm
CB3-137-22	Blue	35 mm	22	33,50 mm
CB3-150-16	Yellow	38 mm	16	34,80 mm
CB3-150-18	White	38 mm	18	35,61 mm
CB3-150-20	Red	38 mm	20	36,32 mm
CB3-150-22	Blue	38 mm	22	36,68 mm

FEATURES

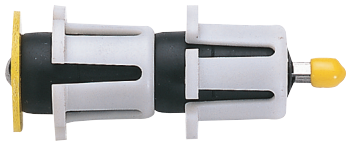
> Bi-directional for easy loading
> 75 mm long for larger cleaning surface
> Piston design for maximum speed
> Color-coded for easy identification
> Reusable



Bi-directional 75 mm Coiled Tube Brushes are available for tubes 22,2 to 38 mm O.D. with BWG ranges 16 to 22.

Tube Cleaning Projectiles Continued

POLYMER SUPER SCRUBBERS

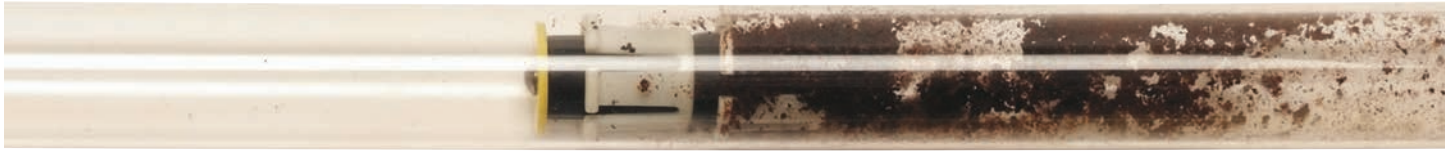


Goodway Polymer Super Scrubbers clean without scratching. These scrubbers come equipped with wear resistant polymer blades and resilient nitrile bushings. Each reusable projectile is color-coded to size and features a patented force adjustment, preset by the factory, to match both the type of deposit and the tube material. They are designed for use with the BFP-3510 Big Shot Tube Cleaning System.

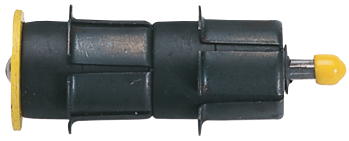
FEATURES

> Polymer blades
> Nitrile bushings
> Color-coded for easy identification
> Reusable

Polymer Super Scrubbers are available for tubes 22,2 mm to 25,4 mm O.D. with BWG ranges 16 to 25.



POLYMER SUPER SCRUBBERS

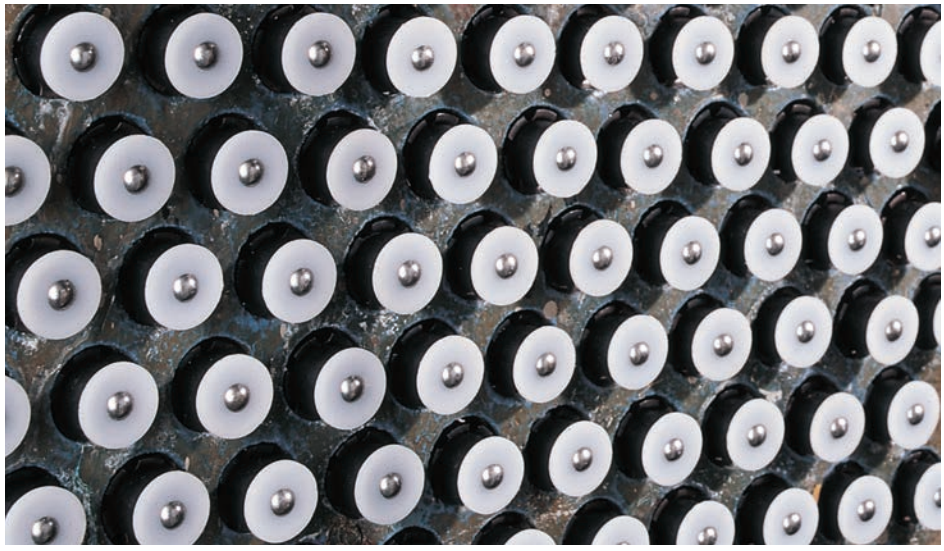


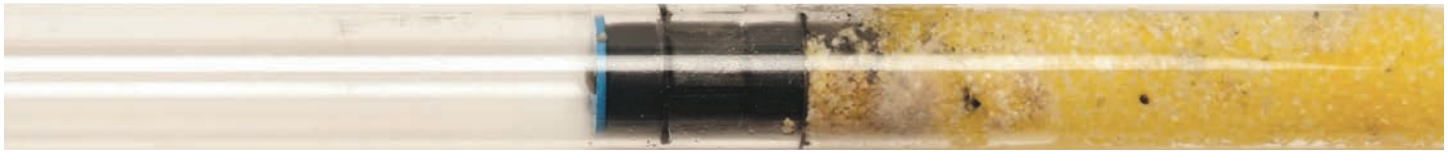
Goodway Carbon Steel Super Scrubbers are the most advanced tube cleaning projectiles available. They come equipped with either high tensile carbon steel blades and resilient nitrile bushings. Each reusable projectile is color-coded to size and features a patented force adjustment, preset by the factory, to match both the type of deposit and the tube material. When shot with a BFP-3510 Big Shot Tube Cleaning System they provide the best method for removing hard deposits from power plant condenser tubes.

FEATURES

> Carbon steel blades
> Nitrile bushings
> Color-coded for easy identification
> Reusable

Carbon Steel Super Scrubbers are available for tubes 15,9 mm to 32 mm O.D. with BWG ranges 16 to 25.





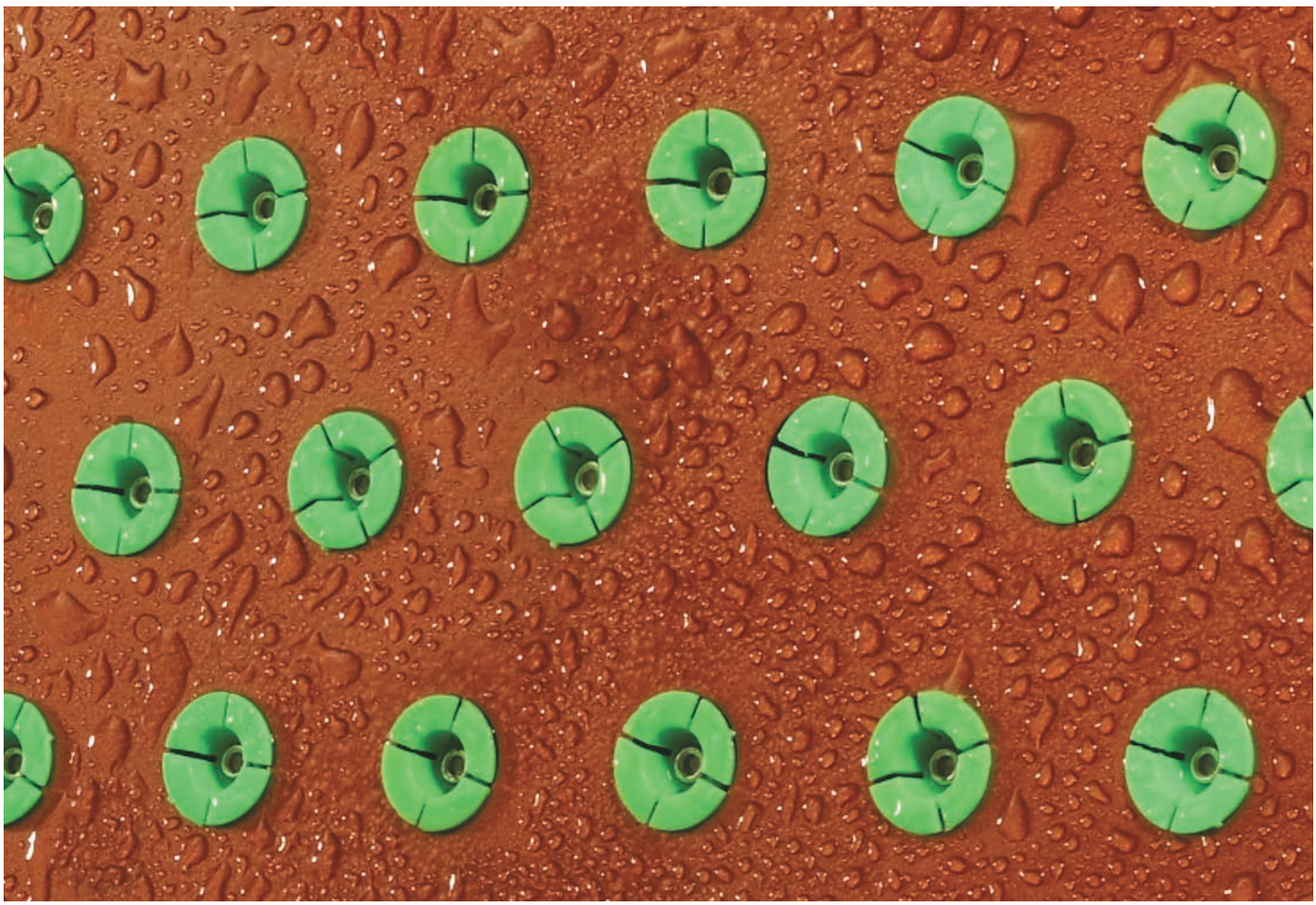
SUPER SCRAPERS

Goodway Super Scrapers are virtually indestructible. They will not rust or crush under normal working conditions. They feature stainless steel blades which are precision engineered to match the internal diameter of the tube to be cleaned. This precise sizing of the blades to the tube specifications allows the scrapers to remove even the most stubborn deposits. They are ideal for hard scale, calcium, manganese and tough biological growth like zebra muscles.

FEATURES

> Stainless steel blades
> Modular design
> Color-coded for easy identification
> Reusable

Super Scrapers are available for tubes 15,9 to 32 mm O.D. with BWG ranges 18 to 22.



Pneumatic Hose / Tube Cleaning Guns

Specifications	JetLoad®	JetLaunch®	JetLaunch®-XL
Air Requirements:	Minimum 4,1 BAR	Minimum 6,2 BAR	Minimum 6,2 BAR
	Maximum 6,9 BAR	Maximum 8,3 BAR	Maximum 10,3 BAR
Dimensions:	203 to 254 mm long (depending on nozzle)	75 to 130 mm long (depending on nozzle)	304 to 279 mm long (depending on nozzle)
Weight:	.8 kg	0,7 kg	3,2 kg
Optional Carrying Case:	410 mm (H) x 460 mm (W) x 530 mm (D)	410 mm (H) x 460 mm (W) x 530 mm (D)	381 mm (H) x 508 mm (W) x 139 mm (D)

Speed Load Pneumatic Hose/Tube Cleaning Gun

Pneumatic Hose/Tube Cleaning Gun

JETLOAD®

JL-5010 JetLoad Pneumatic Cleaning Gun Only

JCL-3000 Adapter Ring for nozzles 4.7625 mm - 31.75 mm

JL-5030 JetLoad Pneumatic Hose Cleaning Gun, including 9 standard hose nozzles and carrying case

JCL-5030 JetLoad Pneumatic Hose Assembly Cleaning Gun, including 9 standard coupling nozzles and carrying case

JLT-5030 JetLoad Pneumatic Tube Cleaning Gun, including 9 standard tube nozzles and carrying case

FEATURES

> Hinged faceplate for easy loading of projectiles
> Pressure relief valve to eliminate back pressure
> Trigger guard
> Quick connect fittings

JETLAUNCH®

JCL-2010 JetLaunch Pneumatic Cleaning Gun Only

JCL-3000 Adapter Ring for nozzles 4.7625 mm - 31.75 mm

JCL-2030 JetLaunch Pneumatic Hose Cleaning Gun, including 9 standard hose nozzles and carrying case

JIL-2030 JetLaunch Pneumatic Hose Assembly Cleaning Gun, including 9 standard coupling nozzles and carrying case

JCL-2060 JetLaunch Pneumatic Tube Cleaning Gun, including 9 standard tube nozzles and carrying case

FEATURES

> Trap door for quick loading of projectiles
> Pressure relief valve to eliminate back pressure
> Trigger guard
> Quick connect fittings

JETLAUNCH®-XL

JetLaunch-XL JetLaunch Pneumatic Cleaning Gun, nizzle and carrying case

Pneumatic Hose/Tube Cleaning Gun for tubes 50 to 114 mm

Pneumatic Hose / Tube Cleaning Nozzles

NOZZLES FOR JETLOAD®, JETLAUNCH® AND JETLAUNCH® XL

Nozzles:

Nozzles are available for cleaning any tube, pipe or hose 4.76 - 50 mm I.D. Hose nozzles are tapered to fit inside the ends of hoses. Tube nozzles are designed to butt up against the ends of tubes and pipes for complete end to end cleaning. JIC nozzles are available for thorough cleaning of hoses with attached couplings.

Note: Custom nozzles available.

Part Number	For Hose I.D.
JCN-2100	6.3 mm
JCN-2120	9.4 mm
JCN-2130	12.7 mm
JCN-2140	15.7 mm
JCN-2150	19.05 mm
JCN-2160	24.4 mm
JCN-2170	31.75 mm
JCN-2180	38.1 mm
JCN-2190	50.8 mm

Part Number	For Tube/Pipe O.D.
JCN-02505	6.3 mm
JCN-03705	9.4 mm
JCN-05010	12.7 mm
JCN-06207	15.7 mm
JCN-07508	19.05 mm
JCN-10012	24.4 mm
JCN-12512	31.75 mm
JCN-15012	38.1 mm
JCN-20012	50.8 mm

art Number	For Coupling Sizes
JIC-2100	6.3 mm
JIC-2120	9.4 mm
JIC-2130	12.7 mm
JIC-2140	15.7 mm
JIC-2150	19.05 mm
JIC-2160	24.4 mm
JIC-2170	31.75 mm
JIC-2180	38.1 mm
JIC-2190	50.8 mm

Pneumatic Hose / Tube Projectiles

PROJECTILES FOR JETLOAD®, JETLAUNCH® AND JETLAUNCH® XL

Standard Projectiles:

Goodway's Standard Projectiles are specially formulated for use with any pneumatic gun. As a projectile is shot, it is compressed, loosening and propelling dirt and deposits through the hose, tube or pipe. Projectiles are oversized to ensure proper compression for maximum cleaning action.

Note: Abrasive projectiles and custom sizes available.

Part Number	For I.D.	Quantity
JR-07	4.8 mm	100
JR-09	6.3 mm	100
JR-10	6.3 mm	100
JR-12	7.9 mm	100
JR-14	9.4 mm	100
JR-16	11.2 mm	100
JR-18	12.7 mm	100
JR-20	14.22 mm	100
JR-22	15.7 mm	100
JR-26	19.05 mm	50
JR-28	20.62 mm	50
JR-30	22.22 mm	50
JR-33	25.4 mm	50
JR-36	28.57 mm	50
JR-38	28.57 mm	50
JR-40	31.75 mm	50

Part Number	For I.D.	Quantity
JR-45	34.92 mm	25
JR-50	38.1 mm	25
JR-55	44.45 mm	25
JR-60	50.8 mm	25
JR-65	55.55 mm	25
JR-70	60.32 mm	25
JR-75	63.50 mm	25
JR-80	69.85 mm	25
JR-85	76.20 mm	25
JR-90	82.55 mm	25
JR-95	88.90 mm	25
JR-100	95.25 mm	25
JR-106	101.6 mm	25
JR-110	106.36 mm	25
JR-115	107.95 mm	25
JR-120	114.3 mm	25

PROJECTILE SHOT THROUGH HYDRAULIC HOSE

Coupling Projectiles:

Goodway's Coupling Projectiles are made from a soft, dense packed foam, designed to allow the projectile to be shot through a hose, tube or pipe with couplings.

Note: Abrasive projectiles and custom sizes available.

Part Number	For I.D.	Quantity
JC-07	4.8 mm	100
JC-09	6.3 mm	100
JC-10	7.9 mm	100
JC-12	7.9 mm	100
JC-14	9.4 mm	100
JC-16	11.2 mm	100
JC-18	12.7 mm	100
JC-20	14.22 mm	100
JC-22	15.7 mm	100
JC-26	19.05 mm	50
JC-30	22.22 mm	50
JC-33	25.4 mm	50
JC-40	31.75 mm	50
JC-50	38.1 mm	25

Part Number	For I.D.	Quantity
JC-55	44.45 mm	25
JC-60	50.8 mm	25
JC-65	55.55 mm	25
JC-70	60.32 mm	25
JC-75	63.50 mm	25
JC-80	69.85 mm	25
JC-85	76.20 mm	25
JC-90	82.55 mm	25
JC-95	88.90 mm	25
JC-100	95.25 mm	25
JC-106	101.6 mm	25
JC-110	106.36 mm	25
JC-115	114.3 mm	25
JC-120	114.3 mm	25

PROJECTILE SHOT THROUGH HYDRAULIC HOSE WITH COUPLINGS

Video Inspection Scopes

> FLEXIBLE PROBE LESS THAN 10,2 mm DIAMETER

Specifications	VS-S-10	VS-W-30
Power:	3,7 V, rechargeable li-polymer battery	3,7 V, rechargeable li-polymer battery
Running Time:	4 hours	4 hours
Illumination:	6 LED's	6 LED's
Focal Length:	10 mm – 50 mm	10 mm – 50 mm
Field of View:	53°	53°
Viewing Direction:	0° or 90°	0° or 90°
Minimum Radius:	51 mm	51 mm
Image Transfer:	RCA cable	RCA cable
Resolution:	307.200 pixels	307.200 pixels
Interface:	Mini USB 1.1	Mini USB 1.1
Still Image Recording Format:	JPEG, 640 x 480 pixels	JPEG, 640 x 480 pixels
Video Recording Format:	ASF, 320 x 240 pixels	ASF, 320 x 240 pixels
Operating Temperature:	0°–50°C	0°–50°C
Dimensions:	Probe: < 10,2 mm diameter x 3 m or 9,1 m long	Probe: < 10,2 mm diameter x 3 m or 9,1 m long
	(depending on model)	(depending on model)
	Screen: 90 mm diagonal	Screen: 90 mm diagonal
Weight:	Monitor with 3 m Probe: 0,91 kg	Monitor: 0,36 kg
	Monitor with 9,1 m Probe: 2,5 kg	3 m Probe: 0,45 kg
	•	9,1 m Probe: 2,2 kg
	•	Transmitter: 0,09 kg

FEATURES

> 307.200 pixels CMOS image sensor
> 6.35 or 8.9 cm LCD color monitor (depending on model)
> 6 high intensity white LED's
> Flexible image probe
> 53° field of view
> 90° right angle mirror adapter
> Waterproof probe
> Shock resistant optics
> Compatible with SD Card

Tube Leak Detector

FEATURES

> Visible pressure gauges
> Rugged construction
> Multiple seal sizes
> Quick connect fittings
> Compact

Specifications	LD-2X2
Tube Size Range:	19,1 to 25,4 mm I.D.
Air Requirements:	Maximum 6,9 BAR at 25 m^3/h
Dimensions:	230 mm High x 265 mm Wide x 70 mm Deep
Weight:	0,9 kg (Per Gun)

Seal Kits:

LDW-075 Seal Kit with two seals for tubes 19,1 mm O.D., 16 to 18 gauge and two seals for tubes 19,1 mm O.D., 19 to 22 gauge

LDW-078 Seal Kit with two seals for tubes 22,2 mm O.D., 16 to 18 gauge and two seals for tubes 22,2 mm O.D., 19 to 22 gauge

LDW-100 Seal Kit with two seals for tubes 25,4 mm O.D., 16 to 18 gauge and two seals for tubes 25,4 mm O.D., 19 to 22 gauge

Optional:

LDA-058A Adapter Assemblies (two) for tubes 15,9 mm O.D., 16 to 18 gauge (one for each gun)

LDA-058B Adapter Assemblies (two) for tubes 15,9 mm O.D., 19 to 22 gauge (one for each gun)

Stack Efficiency Tester

> NOx TESTER AVAILABLE

FEATURES

> Automatic calibration
> Real time display of measurements and calculations
> Optional printer

SET-200 Stack Efficiency Tester, including protective rubber boot, testing probe and carrying case

SET-200P Same as SET-200 except with printer

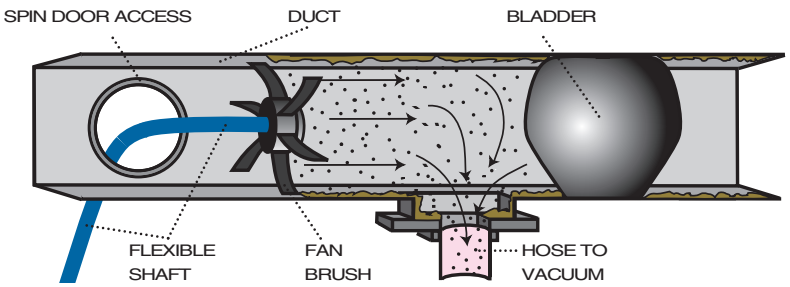
Specifications	SET-200
Flue Temperature Measurement:	Resolution 0,6°C,
	Accuracy ± 2,8°C
	Range 0° to 600°C
O_2 Gas Measurement:	Resolution 0,1%,
	Accuracy ± 0,2%,
	Range 0 to 21%
CO Gas Measurement:	Resolution 1ppm,
	Accuracy ± 10ppm
	< 100ppm ± 0,5%
	Range 0 to 4.000ppm
Calculated CO_2 :	Resolution 0,1%,
	Accuracy ± 0,3%,
	Range 0 to 30%
Calculated Efficiency :	Resolution 0,1%,
	Accuracy ± 1%,
	Range 0 to 99,9%
Calculated Excess Air :	Resolution 0,1%,
	Accuracy ±0,2%,
	Range 0 to 250%
Preprogrammed Fuels:	Natural Gas, Light Oil,
	Heavy Oil and Propane
Probe Dimensions:	510 Long, with 1,8 m Hose
Handset Dimensions:	60 mm High x 100 mm Wide x
	220 mm Deep
Weight:	1 kg

Rotary Duct Cleaner

FEATURES

> Stainless steel construction
> Speed control to set shaft rotation to optimum speed for each application
> Reversible shaft rotation
> Interchangeable cleaning tools
> Integrated dolly
> Simultaneous vacuum
> Belt switch activation

Specifications	AQR-1500
Motor Power:	0,7 kW
Input Power:	6 Amps, 115 V, 60 Hz AC
	Optional 6 Amps, 115 V, 50 Hz;
	3 Amps, 230 V, 60 Hz;
	or 3 Amps, 230 V, 50 Hz
Power Supply Cord:	6,5 m, 14-3 GFCI
Air Requirements:	•
Shaft Speed:	Variable/Reversible 1.500 RPM
Shaft Feed Method:	Manual
Shaft Length:	Maximum 18,3 m
Special Features:	Reversible Shaft Rotation
Dimensions:	940 mm High x 510 mm Wide x
	430 mm Deep
Weight:	22 kg Net Dry



Did you know...?

90% of all ventilation system component failures are caused by debris in ducts.

Note: See page 50-51 for shafts, brushes and accessories.

Note: A dust mask and safety goggles must be worn when operating this equipment – see page 51.

Duct Vacuum

FEATURES

> Two speed motor
> Large HEPA filter
> Pressure gauge to monitor HEPA filter
> Large wheels
> 300 mm hose

Note: A dust mask and safety goggles must be worn when operating this equipment – see page 43.

Replacement Filters

AQ-F0009 Disposable Pleated Filter
AQ-F0044 Electrostatic Filter
AQ-F0046 HEPA Filter

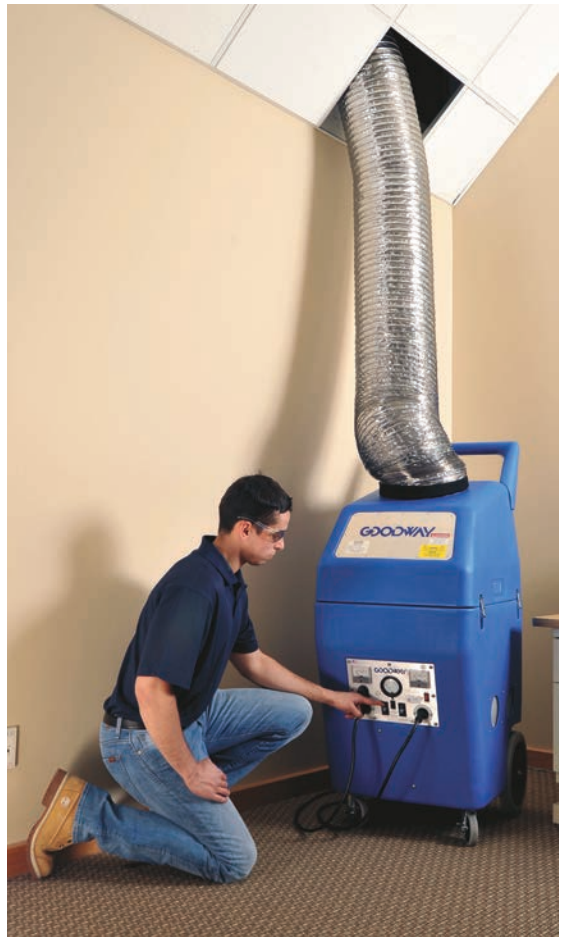
AQ-F0009

AQ-F0044

AQ-F0046

Specifications	AQ-V2M
Motors:	Twin
Motor Power:	2,2 kW (Total)
Input Power:	15 Amps, 115 V, 60 Hz AC
	Optional: 15 Amps, 115 V, 50 Hz;
	7,5 Amps, 230 V, 60 Hz
Power Supply Cord:	Two 7,6 m, 12-3 (On Two Seperate Circuts)
Static Water Lift:	130 mm
Air Displacement	1.359 m^3/h (One Motor)
	2.718 m^3/h (Two Motors)
Filtration:	Disposable Pleated,
	Electrostatic and
	0,3 Microns HEPA
Dry Capacity:	64 Liters
Noise Level:	86 dBA
Special Features:	HEPA Filter
Dimensions:	1.400 mm High x 580 mm Wide x 610 mm Deep
Weight:	66 kg

Note: The AQ-V2M allows the operator to select an airflow of either 1.359 or 2.718 m^3/h, depending on the size of the duct.



Duct Vacuum

AQ-RV450 Powerful two stage vacuum, remote control, twin HEPA cartridge filters and clever modular design make this versatile air vent cleaning system a no-brainer for any job. The AQ-RV450 can be used as a roll anywhere self contained air vent cleaning system or the light weight modular power pack can be detached from the carrier and placed right next to the job. The two directional rotating brush safely removes debris while the dual vacuum motors pull up to 201 CFM back through the hose into the module's disposable vacuum bag. Clean HEPA filtered air is then exhausted from the bottom of the unit.

AQ-RV450-60
Dual 9.5 and 13 amp, 115 V, 60 Hz. Combination brushing and HEPA filtered vacuum cleaner machine with 38.1 mm x 10,67 m hose assembly and three duct cleaning brushes

AQ-RV450A-50
11 amp, 230 V, 50/60 Hz. Combination brushing and HEPA filtered vacuum cleaner machine with 38.1 mm x 10,76 m hose assembly and three duct cleaning brushes

Accessories:

AQ-RV-BRSH-04S 101.6 mm Brush, soft

AQ-RV-BRSH-08S 203.2 mm Brush, soft

AQ-RV-BRSH-10S 254 mm Brush, soft

AQ-RV-BRSH-12S 304.8 mm Brush, soft

AQ-RV-BRSH-12X 304.8 mm Brush, stiff

AQ-RV-SHFT15-35 10,67 m x 38.1 mm Complete hose assembly, blue

Replacement Filters:

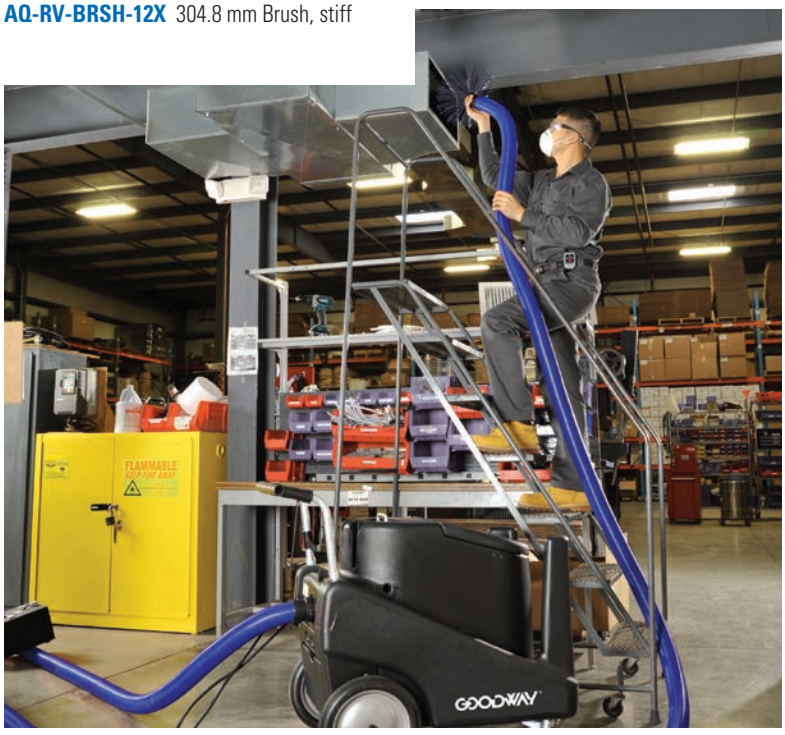
4212-10 Pre-Filtered Bags, set of 10

4213 HEPA Filter

AT-A-GLANCE

- Modular design, use with or without carrier
- Remote vacuum and brush direction control
- Independently controlled twin vacuum motors
- Dual HEPA cartridge filters
- Disposable filter debris bag
- Large diameter rear wheels and lockable casters
- Hose and brush stored on carrier

Specifications	AQ-RV450
Motor Power:	1.8 kW
Input Power:	9.5 and 13 amps
	Optional: 11 amps
Power Supply Cord:	Two 7,6 m, 14-3
Lift:	1524 mm - 508 mm (motors high-low)
Air Flow:	201 CFM - 89 CFM (at manifold, motors high-low),
	111 CFM - 58 CFM (at hose, motors high-low)
Brush Speed:	450 RPM
Pump:	Centrifugal
Hose:	10.67 m x 38.1 mm



Flexible Shafts, Brushes and Accessories

GTC-704-C

Flexible Shafts (Nylon Casing):

For removing light to medium deposits in horizontal ducts up to 457.2 mm I.D.

GTC-704-12-C Flexible Shaft, 3.65 m

GTC-704-17-C Flexible Shaft, 5.18 m

GTC-704-25-C Flexible Shaft, 7.62 m

GTC-704-35-C Flexible Shaft, 10.67m

GTC-704-45-C Flexible Shaft, 13.71 m

GTC-704-60-C Flexible Shaft, 18.29 m

GTC-704G-C

Flexible Shafts (Heat Resistant):

Heat resistant up to 300°F with rigid covered steel casing for removing light to medium deposits in horizontal ducts up to 457.2 mm I.D.

GTC-704G-12-C Flexible Shaft, 3.65 m

GTC-704G-17-C Flexible Shaft, 5.18 m

GTC-704G-25-C Flexible Shaft, 7.62 m

GTC-704G-35-C Flexible Shaft, 10.67m

GTC-704G-45-C Flexible Shaft, 13.71 m

GTC-704G-60-C Flexible Shaft, 18.29 m

GTC-721-C

Flexible Shafts (Covered Steel Casing):

For removing heavy deposits in horizontal ducts up to 457.2 mm I.D. and in all vertical ducts

GTC-721-15-C Flexible Shaft, 4.57 m

GTC-721-25-C Flexible Shaft, 7.62 m

GTC-721-35-C Flexible Shaft, 10.67m

GTC-721-50-C Flexible Shaft, 15.24 m

Note: To order flexible shaft(s) determine duct configuration(s) and length of longest section(s) to be cleaned. Order flexible shaft(s) to correspond with configuration(s) and lengths. (Consult factory for longer flexible shafts if required.)

FAN BRUSH

Fan Brush:

The fan brush is recommended for removing debris in round, rectangular and square ducts. It both loosens and propels deposits down the duct towards the vacuum

FDB-212 Fan Brush, 203.2 mm - 457.2 mm

DUCT BRUSH

Duct Brush:

Soft nylon duct brushes are recommended for removing debris in round ducts.

DUCT-04 Duct Brush, 101.6 mm

DUCT-06 Duct Brush, 152.4 mm

DUCT-08 Duct Brush, 203.2 mm

DUCT-10 Duct Brush, 254.0 mm

DUCT-12 Duct Brush, 304.8 mm

DUCT-14 Duct Brush, 355.6 mm

DUCT-16 Duct Brush, 406.4 mm

DUCT-18 Duct Brush, 457.2 mm

FLARE BRUSH

Flare Brush:

The flare brush is recommended for removing debris in round ducts

FBT-502 Flare Brush for ducts 101.6 mm - 203.2 mm I.D.

Flexible Shafts, Brushes and Accessories

FOGGER

Hole Cutter:
This accessory is designed for use with any standard power drill to cut a circular hole in a duct.

AQ-HC100 Hole Cutter

AQ-HC100R Replacement Bit

Spin Doors:
These insulated doors quickly mount to holes made in ducts. Three latches hold each door securely closed. Select sizes to match the appropriate vacuum hose diameter.

AQ-SD10 Spin Door, 254 mm

AQ-SD12 Spin Door, 304.8 mm

Bladders:
Bladders block portions of a duct system preventing recontamination of previously cleaned ducts and to isolate cleaning areas.

AQ-BL06 Bladder, up to 152.4 mm

AQ-BL10 Bladder, 152.4 - 254 mm

AQ-BL14 Bladder, 254 - 355.6 mm

AQ-BL16 Bladder, 355.6 - 406.4 mm

AQ-BL20 Bladder, 406.4 - 508 mm

Portable Inflator:
This device will inflate even the largest bladder in only seconds.

AQ-ID Portable Inflater, 115 V, 50/60 Hz AC

Note: 230 V unit available – call for price.

Oxine®:
This EPA registered chemical, sprayed into a duct using the AQ-FG Fogger, kills any residual mold, bacteria, mildew, viruses, fungi, algae and any other "living" matter. It is recommended for its low toxicity and safety, and does not leave an active chemical residue. (A 1 pint bottle will sanitize a 5-ton system four times.)

AQ-OX-Q Oxine, 1 pint bottle

Fogger:
The fogger atomizes the Oxine and FreshDuct solutions for thorough distribution throughout a duct.

AQ-FG Fogger, 115 V, 50/60 Hz AC

Note: 230 V unit available – call for price.

FreshDuct:
Air ducts are often sources of odors caused by smoke, pets, cooking, spoilage and other agents. FreshDuct is specially formulated to control odors gently but effectively. Its non-toxic, biodegradable formula encapsulates and destroys odor causing molecules on contact while time releasing a fresh fragrance, freshening and deodorizing the interiors of both lined and unlined ducts.

FRESHDUCT-SPRAY FreshDuct, 397 gram ready-to-use aerosol can

FRSHDCT-15OZ FreshDuct, 425 gram concentrate bottle

FRSHDCT-05 FreshDuct, 19 liter concentrate bottle

FRESHDUCT

OXINE

Safety Equipment:
Safety goggles, gloves and a dust mask must be worn during duct cleaning operations. A safety mask must be worn during the application of Oxine.

PP-100 Safety Goggles

PP-101 Gloves

PP-102-12 Dust Mask (package of twelve)

PP-103 Safety Mask, for use with Oxine

PORTABLE INFLATOR

BLADDER

GOGGLES

DUST MASK

SAFETY MASK

GLOVES

SPIN DOOR

HOLE CUTTER

Commercial Vacuum Cleaners

DV-SV
Stationary Dry Continuous Duty Vacuum

DV-CD
Industrial Dry Continuous Duty Vacuum

VAC-2-HEPA
Industrial Wet/Dry HEPA Vacuum

DV-E3
Triple Motor Wet/Dry Vacuum

VAC-CRV
Clean Room Dry ULPA Vacuum

	DV-SV	DV-CD	VAC-2-HEPA	DV-E3	VAC-CRV
Motor(s):	Single	Single	Twin	Triple	Single
Motor Power:	1.7 kW	2.6 kW	2 kW (Total)	3.4 kW (total)	.7 kW HP
Input Power:	Standard: 8 amps, 230 V, 50/60 Hz AC, three phase Optional: 4 amps, 460 V, 50/60 Hz, three phase	Standard: 10 amps, 230 V, 50/60 Hz AC, three phase Optional: 5 amps, 460 V, 50/60 Hz AC, three phase	Standard: 13 amps, 115 V, 50/60 Hz AC Optional: 6.5 amps, 230 V, 50/60 Hz	Standard: 13 amps, 230 V, 50/60 Hz AC Optional: 22.5 amps, 115 V, 50/60 Hz	Standard: 8 amps, 115 V, 50/60 Hz AC Optional: 4 amps, 230 V, 50/60 Hz
Power Supply Cord:	4.9 m, 14-4	9.1 m, 14-4	11.3 m, 14-3	9.1 m, 14-3	10.7 m, 14-3
Air Requirements:	•	•	•	•	•
Air Line:	•	•	•	•	•
Static Water Lift:	2743.1 mm	2997.2 mm	1676.4 mm	2286 mm	2108.2 mm
Air Displacement:	118 CFM	176 CFM	150 CFM	353 CFM	100 CFM
Filtration:	3 microns polyester pocket	Standard: 3 microns polyester pocket Optional: 1 micron anti-static pocket and 0.3 microns HEPA	5 microns paper, 5 microns paper and 0.3 microns HEPA	Standard: 3 microns polyester pocket Optional: 1 micron anti-static pocket and 0.3 microns HEPA	5 microns paper, 2 microns paper and 0.12 microns ULPA
Tank:	22.7 liter stainless steel	34.1 liter bonderized steel	75.7 liter stainless steel	102.2 liter bonderized steel	19.8 liter stainless steel
Dry Capacity:	22.7 liter	34.1 liter	18.9 liter	102.2 liter	18.9 liter
Wet Capacity:	•	•	45.4 liter	98.4 liter	•
Noise Level:	76 dBA	70 dBA	74 dBA	78 dBA	81 dBA
Special Features:	Continuous duty blower motor External filter shaker Stationary	Continuous duty blower motor External filter shaker Roll-out tank	HEPA filter Disposable collection bag	External filter shaker Roll-out tank	ULPA filter Disposable collection bag Stainless steel tool bin
Dimensions:	584 mm (H) x 355 mm (W) x 711 mm (D)	1143 mm (H) x 483 mm (W) x 914 mm (D)	381 mm diameter tank x 1016 mm (H)	521 mm diameter tank x 1524 mm (H)	1041 mm (H) x 508 mm (W) x 813 mm (D)
Weight:	33 kg	84 kg	29 kg	82 kg	19.5 kg

Commercial Vacuum Cleaners

	DV-EX115H & DV-AV9-EX Explosion Proof HEPA Vacuum	DV-AV-EP Explosion Proof Vacuum	DV-CM ChipMaster® Vacuum with Pump-Out	AV-1200-15SS Air Powered Wet/Dry Vacuum	GTC-540-20SS Heavy-Duty Soot/Powder Vacuum
Motor(s):	•	•	Triple	•	Twin
Motor Power:	1.27 kW	•	3.4 kW (total)	•	1.7 kW (Total)
Input Power:	Standard: 11 amps, 115 V, 60 Hz AC	•	Standard: 13 amps, 230 V, 50/60 Hz AC Optional: 22.5 amps, 115 V, 50/60 Hz	•	Standard: 14 amps, 115 V, 50/60 Hz AC Optional: 7 amps, 230 V, 50/60 Hz
Power Supply Cord:	9.1 m	•	9.1 m, 14-3	•	11.3 m, 14-3
Air Requirements:	•	Minimum 3.4 bar at 35 CFM, Maximum 6.2 bar at 50 CFM	•	Minimum 3.4 bar at 35 CFM, Maximum 6.2 bar at 50 CFM	•
Air Line:	•	12.7 mm I.D. or larger	•	12.7 mm I.D. or larger	•
Static Water Lift:	1625 mm at 6.2 bar	4064 mm at 6.2 bar	2286 mm	4318 mm at 6.2 bar	1270 mm
Air Displacement:	100 CFM at 6.2 bar	125 CFM at 6.2 bar	353 CFM	125 CFM at 6.2 bar	270 CFM
Filtration:	0.3 micron HEPA and 1 micron cartridge pre-filter	1 micron anti-static pocket	1.27 mm metal chip basket and 300 microns polypropylene	15 microns polypropylene and 15 microns dacron	15 microns polypropylene and 15 microns dacron
Pump Flow:	•	•	151 LPM	•	•
Tank:	19 liters stainless steel	56.8 liters stainless steel	250 liters bonderized steel	57 liter stainless steel	76 liters stainless steel
Dry Capacity:	19 liters	56.8 liters	83 liter	53 liter	76 liters
Wet Capacity:	•	•	250 liter	38 liter	•
Noise Level:	70 dBA	74 dBA	78 dBA	84 dBA	78 dBA
Special Features:	Air powered External filter shaker Roll-out tank	Air powered External filter shaker Roll-out tank	Vertical intake Chip collection basket External pump	Air Powered	Polyethylene tank liner Disposable collection bag
Dimensions:	1016 mm (H) x 483 mm (W) x 533 mm (D)	520 mm diameter tank x 1626 mm (H)	1168 (H) x 559 mm (W) x 1118 mm (D)	381 mm diameter tank x 914 mm (H)	381 mm diameter tank x 1219 (H)
Weight:	32 kg	60 kg	100 kg	26 kg	32 kg

Triple Motors For High Lift And High Flow

FEATURES

- Three heavy-duty motors
- Exhaust muffler
- Three tank sizes
- Liquid shut-off
- Metal deflector
- Reusable filters
- 38.1 mm or 50.8 mm hoses

Specifications	VAC-3A
Motor Power:	Triple
Input Power:	3 kW (total)
Power Supply Cord:	13,5 amps, 230 V, 50/60 Hz AC
Static Water Lift:	2,1 m
Air Displacement:	459 m^3/h
Filtration:	15 micron polypropylene and 15 microns dacron
Tank/Drum:	57 liters
Dry Capacity:	53 liters
Wet Capacity:	38 liters
Noise Level:	78 dBA
Dimensions:	tank: 380 mm (D) x 910 mm (H)
Weight:	32 kg

VAC-3A

Do you have a heavy duty mess that other vacuums aren't quite up to? Three motors in the VAC-3A generate 1676 mm of static water lift while moving 245 CFM of air. That translates into high velocity cleaning of large volumes of dirt, debris and liquids pulled from your shop floor in seconds. You also get a choice of 56.8, 113.5 or 208.2 liter tank capacity for carting off the really tough jobs. Choose from a wide variety of available vacuum kits and tools to create the ultimate industrial wet-dry vacuum.

VAC-3A-15SS
Industrial Wet-Dry Vacuum, including filters, 56.8 liter stainless steel tank, handles, wheels and casters

VAC-3A-15SS

VAC-3A-30*
Industrial Wet-Dry Vacuum, including filters and 457.2 - 508 mm diameter drum adapter ring (no drum)

VAC-3A-30-DD
Same as VAC-3A-30, plus 113.5 liter bonderized steel drum, dolly and tool storage box

VAC-3A-30-DD

VAC-3A-55*
Industrial Wet-Dry Vacuum, including filters and 558.8 - 609.6 mm diameter drum adapter ring (no drum)

VAC-3A-55-DD
Same as VAC-3A-30, plus 208.2 liter bonderized steel drum, dolly and tool storage box

VAC-3A-55-DD

***Note:** Fits any standard drum 113.5 liter or 208.2 liter depending on model.

Note: Vacuums do not include accessories. Order VAC-KIT-9 or individual accessories

VAC-KIT-9

Accessories:

VAC-KIT-9 38.1 mm Industrial Vacuum Accessory Kit: 305 m Neoprene Wire Reinforced Hose, 1371.6 mm Double Bend Wand, 1371.6 mm Extension Tube, 1.5 m Extension Tube, 355.6 mm Nylon Floor Brush, 355.6 mm Squeegee Floor Tool, 355.6 mm Rough Surface Fiber Shod Floor Tool, 203.2 mm Wall and Overhead Brush, and 685.8 mm Steel Crevice Tool

Dump Valve (Factory Installed):

DDV-100M Full Flow Ball Valve, 25.4 mm

DDV-E90 Elbow, 90°

DDV-675 Garden Hose Connector

Storage Pouch:

VAC-TOOL-TOTE Durabond Tool Storage Pouch

Replacement Filters:

GTC-175 Polypropylene Filter, 15 microns

GTC-176 Dacron Filter, 15 microns

VAC-P-51 Water Guard Filter

GPW-1300

This GPW-1300 heavy-duty pressure washer delivers tons of features to make you more productive. One look at this rugged pressure washer and you can see that it's been engineered to please even in tough environments. Five spray nozzles with rack storage, 7.62 meter of flexible spray hose neatly wrapped around its on-board hose reel, a rugged dolly and 1,300-PSI of pressure allow you to tackle a variety of cleaning tasks.

GPW-1300-60
Heavy-Duty pressure washer including 7.62 m high pressure hose, hose reel, two piece 914.4 mm wand, spray gun, 5 quick connect spray nozzles, nozzle rack and 2-wheel dolly

Recommended:
APC-100 All Purpose Cleaner, case of four 3.8 liter bottles

FEATURES

- Five Color-coded quick connect nozzles
- On-board nozzle rack and hose reel
- 7.62 m high pressure hose
- Mobile 2-wheel dolly
- Auto shut off for extended pump life

Specifications	GPW-1300
Motor Power:	1.38 kW
Input Power:	115 V, 60 amps and 230 V, 50 amps
Power Supply Cord:	14-3 GCFI
Water Requirements:	minimum 1.7 BAR
Output Water Pressure:	89 BAR
Output Water Flow:	6.13 LPM
Pump:	Triplex Piston
Dimensions:	91.4 cm (H) x 43.7 cm (W) x 40.6 cm (D)
Weight:	32.6 kg

Mold Remediation Equipment

MP-50

The MP-50 MoldPro™ Sprayer provides an easy, convenient method for applying MoldTek chemicals. The unit features a 12 V DC rechargeable battery and large 19 liter spray tank for remote operations.

Specifications	MP-50
Input Power:	7 Amps, 12 V, DC Rechargeable Battery
Recharge Power:	0,1 Amps, 115 V, 60 Hz AC
	Optional: 0,05 Amps, 230 V, 50 Hz
Chemical Tank:	19 Liters
Output Water Pressure:	6,6 BAR
Output Water Flow:	1,9 LPM
Pump:	Intermittent Duty Cycle
Dimensions:	660 mm High x 480 mm Wide x
	200 mm Deep
Weight:	12 kg

Mold Remediation Chemicals

MOLDTEK™, MOLDTEK-XC AND MOLDTEK-MT

Mold and mildew are not only unsightly and unpleasant to smell. They are also a serious health concern for you, your staff and your tenants. Remove and prevent mold and mildew with these proven and effective MoldTek formulations. MoldTek is fast – it's pre-mixed and ready to use. MoldTek-XC is a concentrate – perfect for big jobs or where storage is at a premium. MoldTek-MT inhibits future mold growth. Just one application extends the effectiveness of your cleaning and helps prevent mold's return.

MoldTek Mold and Mildew Remover:

MoldTek combines the germ killing ability of a disinfectant with a cleaning agent to remove harmful mold and mildew. It **disinfects, cleans and deodorizes** hard, non-porous, inanimate environmental surfaces, such as walls and floors, where microbial contamination may accumulate. It is mild, without any damaging side effects to equipment and surfaces. Its light citrus scent dissipates rapidly making it a pleasure to use. It will not stain or blemish most fabrics.

MOLDTEK-01 MoldTek ready-to-use mold and mildew remover, 3,8 liter bottle

MOLDTEK-4X1 MoldTek ready-to-use mold and mildew remover, case of four 3,8 liter bottles

MOLDTEK-32OZ MoldTek ready-to-use mold and mildew remover, 946 ml spray bottle

MOLDTEK-32OZ-CS MoldTek ready-to-use mold and mildew remover, case of twelve 946 ml spray bottles

Note: 19 liter bottles and 208 liter drums available.

MoldTek-XC Mold and Mildew Remover:

MoldTek-XC is a concentrated one step disinfectant that is effective against a broad spectrum of bacteria and kills mold and mildew on contact. This is a no rinse solution that **disinfects, cleans and deodorizes** in one labor saving step. It's concentrated formula delivers superior performance at a lower end-use cost. 1 gallon of concentrate will produce 64 gallons of finished product. Moisture from floods, broken pipes, or even uncontrolled humidity can result in mold contaminated indoor spaces. MoldTek-XC can be used to disinfect surfaces encountered in every phase of mold remediation. The concentrated formula means you pay only for the powerful cleaning agents, not the water required for the final solution. The finished product can be wiped, mopped or sprayed onto the surface to be cleaned.

MOLDTEK-XC-01 MoldTek-XC concentrate mold and mildew remover, 3,8 liter bottle

MOLDTEK-XC-4X1 MoldTek-XC concentrate mold and mildew remover, case of four 3,8 liter bottles

MoldTek-MT Mold and Mildew Inhibiter:

MoldTek-MT is an antimicrobial treatment that **controls and inhibits** the growth of microorganisms, such bacteria, and fungi and mold, on floors and walls. Damp musty odors caused by microbial contamination from excessive moisture, high levels of humidity, and flood and water damage is a serious problem in many living and working environments. Unsightly black mold streaks on walls and floors are all too often en-countered in all types of buildings today. Microorganisms are everywhere causing odors, damaging surfaces and secreting toxic byproducts to living and working areas. MoldTek-MT is specially formulated not only to control the growth of microorganisms on floors and walls, but its residual effect inhibits the re-growth of microbes for months.

MOLDTEK-MT-01 MoldTek-MT ready-to-use mold and mildew inhibiter, 3,8 liter bottle

MOLDTEK-MT-5 MoldTek-MT ready-to-use mold and mildew inhibiter, 19 liter bottle

MOLDTEK-MT-4X1 MoldTek-MT ready-to-use mold and mildew inhibiter, case of four 3,8 liter bottles

MOLD FACT

Many molds are capable of producing compounds which are toxic to other organisms, including people. More than 200 mycotoxins have been identified from common mold. One of these, Aflatoxin B1 is one of the most potent carcinogens known. It has been positively linked to liver cancer and is a suspected cause of lung cancer.

What's Inside...

Coil Cleaners	2 to 5
Cooling Towner Cleaners	6 to 8
Tube Cleaners	9 to 26
Chemical Descalers	23 to 24
Firetube Boiler Cleaners	28 to 33
Surface Condenser Cleaners	34 to 40
Hydraulic Hose Cleaners	441 to 43
Test And Inspection Equipment	44 to 46
Duct Cleaners	47 to 51
Vacuums And Accessories	52 to 54
Pressure Washers	55
Mold Remediation	56 to 57

METRIC TO U.S. CONVERSION FORMULAS

To Convert:	Multiply by:	Then Add:
Linear Measures		
Millimeter(mm) to Inch (in)	0,039	
Centimeter (cm) to Inch (in)	0,394	
Meter (m) to Foot (ft)	3,281	
Square Measures		
Square Centimeter (cm^2) to Square Inch (sq in)	0,155	
Square Meter (m^2) to Square Foot (sq ft)	10,764	
Measures of Volume		
Cubic Centimeter (cm^3) to Cubic Inch (cu in)	0,061	
Cubic Meter (m^3) to Cubic Foot (sq ft)	35,315	
Liter (l) to U.S. Gallon (g)	0,264	
Weight		
Kilogram (kg) to Pound (lb)	2,205	
Pressure		
BAR a PSI	14,504	
Power		
Kilowatt (kW) to Horsepower (HP)	1.341	
	Multiply by:	**Then Add:**
Temperature		
Celsius (°C) to Fahrenheit (°F)	1,8	32

DISTRIBUTED FOR:

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